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I, Sung Doo Kim , hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Business Administration.

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Investigating the Antecedents and Consequences of Boundary Permeability at Work and Home

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Investigating the Antecedents and Consequences

of Boundary Permeability at Work and Home

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ABSTRACT

Given the increasing demands of the contemporary workplace, managing the demands of work and home is an important topic for individuals and organizations alike. Viewing work and home as separate yet interdependent domains, each surrounded by a boundary, I investigate boundary permeability at work and home in terms of antecedents and consequences. As antecedents of *work* boundary permeability, I examine the direct effects of two variables, segmentation preference at work and workload, while investigating the moderating effect of job control on these direct relationships. As antecedents of *home* boundary permeability, I examine the direct effects of segmentation preference at home and home demands, while exploring the moderating effect of home support. Consistent with prior studies suggesting that work and home boundaries are asymmetrically permeable, I investigate how complementary factors affect each boundary differently. In regard to consequences, I investigate the direct effects of boundary permeability on employees' conflict (time-based and strained based) and positive spillover (affective and instrumental facets) across domains. In addition, I examine the moderating effect of segmentation preference on these direct relationships. My results show that high work boundary permeability was predicted by strong segmentation preference, heavy home demands, and light workload while high home boundary permeability was predicted by strong segmentation preference and heavy workload. Regarding the consequences, high permeability of work and home boundaries led to higher work-home conflict, but not to higher positive spillover. High work boundary permeability led to strain-based home-to-work conflict while high home boundary permeability led to both time- and strain-based home-to-work conflict. Implications for research and practice are discussed along with future research directions.

DEDICATION

There are numerous people without whom I could not have completed this dissertation. I dedicate this body of work to them.

- To my wife, for her great support and patience while I was pursuing my doctorate.
- To my parents and brother, and my parents in law, for their continued loving support.
- To my advisor, Elaine Hollensbe, for her sincere care and encouragement.
- To my friends, Dae Ho, Il Ho, Jeremy, and Sun Hyun for their advice and emotional support.
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CHAPTER 1. INTRODUCTION

As technological advances heighten expectations for accessibility anytime and anywhere, it is increasingly common that employees take care of personal matters during work hours, and deal with work-related matters after hours (Valcour & Hunter, 2005; Wajcman, Rose, Brown, & Bittman, 2010). This blurred boundary between work and home poses serious challenges to employees as they are struggling to meet the demands of work and home (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Kossek, Lautsch, & Eaton, 2005; Kreiner, Hollensbe, & Sheep, 2009; Nippert-Eng, 1996b). This is particularly true given the changing nature of families, including the increasing number of dual-career and single-parent families who face even greater challenges in managing work and home (Greenhaus & Allen, 2011; Marks, 2006). Extant research on boundary permeability, or the degree to which a boundary constructed around one domain (work or home) allows aspects of another domain (work or home) to enter (Ashforth, Kreiner, & Fugate, 2000) suggests that individuals with highly integrated boundaries between work and home are more likely to experience conflict between their work and home roles due to limited time, increased stress, and competing behavioral expectations (Eby et al., 2005; Greenhaus & Beutell, 1985). Given the implications of boundary permeability on employee work-home outcomes, recently researchers have started to examine its antecedents (e.g., individual differences in preferred roles, and segmentation preference) and consequences (e.g., work-home conflict) (e.g., Bulger, Matthews, & Hoffman, 2007; Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006; Powell & Greenhaus, 2010). Although this initial research contributes to our knowledge about boundary permeability, a host of other factors may be involved but have gone untested. Thus, more research is needed to test additional antecedents and consequences.

Further, given the growing number of family-friendly programs and benefits, knowledge about work and home boundaries may also be useful to practitioners. Although organizations have expanded these practices over the years, research has found mixed results as to whether they contribute to or detract from the balance many employees seek between their work and home lives (Kossek & Lambert, 2005; Osterman, 1995). Given preliminary evidence on its link to employee work and home outcomes (e.g., Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006), a deeper understanding of boundary permeability may lead to practical recommendations for managers about how to help their employees manage preferred boundaries at work and at home. Accordingly, I investigate possible antecedents that affect boundary permeability, and possible consequences resulting from boundary permeability.

This chapter provides an overview of my dissertation. First, I outline gaps in the existing literature on boundary permeability. Next, I describe the purpose of the study and its potential contributions. Finally, I provide an overview of the structure of the dissertation.

Overview of Current Literature

Boundaries are defined as "physical, emotional, cognitive, and/or relational limits that define entities as separate from one another" (Ashforth et al., 2000: 474). In the work-home literature, these entities are domains (work domain and home domain), and a boundary surrounds each domain (work boundary and home boundary) (Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006). A boundary is permeable when individuals are physically located in one domain but psychologically and/or behaviorally involved in another domain (Ashforth et al., 2000; Clark, 2000; Pleck, 1977). Consistent with the definition of boundaries above, aspects from one domain that may affect or spill over into another domain include behaviors or actions, emotions, and thoughts. For example, *high work boundary permeability* indicates that elements of a home

domain affect or spill over into the work domain (e.g., taking calls from elderly parents or young children while at work), while *high home boundary permeability* signifies that elements of a work domain affect or spill over into the home domain (e.g., dealing with unfinished work or making phone calls to clients while at home). In contrast, *low work boundary permeability* indicates that elements of a home domain rarely affect or spill over into a work domain (e.g., not allowing calls from family members while at work), while *low home boundary permeability* signifies that elements of a work domain rarely affect or spill over into a home domain (e.g., not doing work or taking calls from clients while at home).

Previous research has examined some factors that may affect work and home boundary permeability. For example, as antecedents of boundary permeability, some scholars (e.g., Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006) have examined role identification, the degree of importance people place on their work and home roles (Sheldon & Burke, 2000). Others (e.g., Powell & Greenhaus, 2010) have examined segmentation-integration preferences, the extent to which people prefer to segment or integrate aspects of work and home (Kreiner, 2006; Nippert-Eng, 1996b). Although these endeavors add to our knowledge about the antecedents of boundary permeability, questions remain. For example, existing research has focused only on individuals' characteristics without examining concurrently the domains' characteristics (e.g., demands and resources of work and home). Yet, previous research has suggested the possibility of domain effects suggested (Ammons, 2013; Ashforth et al., 2000).

In addition, prior empirical studies (e.g., Eagle, Miles, & Icenogle, 1997; Frone, Russell, & Cooper, 1992b; Hecht & Allen, 2009) have consistently found that work and home boundaries are asymmetrically permeable. That is, the extent to which demands from home domain spill over into work is not necessarily the same as the extent to which demands from work spill over

into the home domain. Despite this finding, little is known as to *why* these two boundaries are asymmetrically permeable. To answer this question, I examine factors that may affect differentially the permeability of these two boundaries. Further, given the perspective that there are two distinct boundaries, I investigate complementary factors that might affect one boundary (work or home) but not the other.

In regard to the consequences of boundary permeability, only a handful of outcomes have been examined. Specifically, several researchers (Bulger et al., 2007; Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006) have examined reactions to role boundary interruptions, a case of boundary permeability in that a role from one domain interrupts activity in the other domain. This research has been in the area of work-home conflict, a form of inter-role conflict which individuals experience due to incompatible role pressures from the work and home domains (Greenhaus & Beutell, 1985; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Other researchers have studied work-home enhancement, also referred to as enrichment or positive spillover, "the transfer of positively valenced affect, skills, behaviors, and values from the originating domain to the receiving domain, thus having beneficial effects on the receiving domain" (Hanson, Hammer, & Colton, 2006: 251). Enhancement occurs when permeable boundaries allow resources generated in one domain to improve the quality of life in another domain (Greenhaus & Powell, 2006). Despite the contribution of these studies, research needs to move beyond current practices to deepen our knowledge about the consequences of boundary permeability for several reasons. First, although individuals may simultaneously experience work-home conflict *and* positive spillover, previous studies have rarely examined both of these boundary permeability consequences within the framework of a single model (Chen, 2009). Second, possible moderators of the relationship between boundary permeability and work-home

outcomes have not been investigated. Finally, although available instruments assess work-home conflict and positive spillover along multiple dimensions (Carlson, Kacmar, & Williams, 2000; Hanson et al., 2006), previous studies typically have utilized an overall or global measure rather than consider the effects of specific dimensions.

Purpose

The purpose of my dissertation is to better understand the permeability of work and home boundaries in terms of their antecedents, which predict boundary permeability in each domain (work and home), and consequences, which are predicted by boundary permeability in each domain (work and home). Toward this end, I first examine individual and domain-specific factors that may directly or indirectly affect boundary permeability. Specifically, I examine the direct effects of segmentation preference at work and workload on work boundary permeability, while investigating the moderating effect of job control on these direct relationships. Further, I examine the direct effects of segmentation preference at home and home demands on home boundary permeability, while exploring the moderating effect of home support. As noted earlier, prior studies have shown that work and home boundaries are asymmetrically permeable (Eagle et al., 1997; Frone et al., 1992b; Hecht & Allen, 2009). One way to examine this asymmetry is by investigating the extent to which complementary factors (e.g., demands) affect each boundary (work and home) differently. Next, I investigate the direct effects of boundary permeability on employees' work and home outcomes, and the moderating role of segmentation preference on these direct relationships. Specifically, as consequences, I examine conflict and positive spillover across domains, and I consider these effects both from work-to-home and the home-to-work standpoints. For example, for conflict, I include measures of both work-to-home conflict and home-to-work conflict.

Potential Contributions

Broadly speaking, my dissertation contributes to the work-home literature on boundary permeability in several ways. First, by offering a finer-grained analysis of linkages among the proposed variables, my study deepens understanding of boundary permeability. Second, my study expands knowledge of individual and domain-specific factors that directly or indirectly affect boundary permeability at work and home. Further, considering that I examine how complementary factors affect each boundary differently, this study sheds additional light on asymmetric permeability.

Next, my dissertation also advances our knowledge about the consequences of boundary permeability. By simultaneously examining both positive and negative consequences of boundary permeability, I am responding to a call for more attention to the complexity of work-home consequences (Barnett, 2001; Frone, 2003; Parasuraman & Greenhaus, 2002). In addition, my study expands our knowledge about boundary permeability by examining possible moderators in the relationship between boundary permeability and work and home outcomes. Finally, my research takes the literature one step further by overcoming some of the limitations of existing studies (e.g., Bulger et al., 2007; Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006; Powell & Greenhaus, 2010). Specifically, much of the previous work has studied the effects of boundary permeability on work-home conflict or enhancement in one direction (either work-to home or home-to-work) rather than bi-directionally (both work-to-home and home-to-work). Thus, there has been only a partial rather than a more complete picture of these effects. Also, rather than using global measures, I use measures that include multiple dimensions of conflict and enhancement across domains in the same study. Using measures with multiple dimensions may contribute to a more nuanced understanding of the nature of the effects of

boundary permeability. Finally, I employ a lagged rather than a cross-sectional design to investigate more precisely the antecedents of boundary permeability. This methodological design may help control method biases (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) that have created limitations in past studies.

Structure of the Dissertation

My dissertation is organized as follows. In Chapter Two, I review the literature on boundary theory in general and the antecedents and consequences of boundary permeability in particular. In this chapter, I also propose a theoretical model of antecedents of boundary permeability, as well as a model of its consequences. In Chapter Three, I lay out specific hypotheses based on the theoretical models, and in Chapter Four, I describe the research methods used in my dissertation. In Chapter Five, I provide the results from my analyses of the data. Finally, in Chapter Six, I discuss the findings, implications for research and practice, and limitations and future research.

CHAPTER 2. LITERATURE REVIEW

In this chapter I review the literature on work-home boundaries. Specifically, I first provide a brief overview of boundary theory as it is used in the work-home literature, and then discuss previous studies on the antecedents and consequences of boundary permeability.

Overview of Boundary Theory

According to boundary theory (Ashforth et al., 2000; Clark, 2000; Nippert-Eng, 1996a; Nippert-Eng, 1996b), individuals actively establish and maintain boundaries around their work and home domains. Work-home researchers have presented numerous models linking work and home domains (e.g., spillover, compensation, segmentation-integration, resource drain, congruence, work-family conflict; see Edwards and Rothbard, 2000 for a review). The model most relevant to boundary permeability is the segmentation-integration model which assumes that individuals vary in the extent that they prefer the domains of work and home to be segmented or integrated (Kreiner, 2006; Nippert-Eng, 1996a; Nippert-Eng, 1996b). High integration is when individuals prefer to blend various aspects of their work and home lives, whereas high segmentation is when individuals prefer to keep aspects of their lives separate (Nippert-Eng, 1996a). In regard to the segmentation-integration distinction, two important points should be noted. First, most researchers regard preferences for segmentation versus integration as opposite ends of the same continuum (Ashforth et al., 2000; Kreiner, 2006; Nippert-Eng, 1996a; Nippert-Eng, 1996b). Second, the two directions of these preferences (work-to-home and home-to-work) are suggested to vary independently from each other (Kreiner, 2001; Olson-Buchanan & Boswell, 2006). For example, the extent to which individuals integrate work into their home domain (e.g., bring unfinished work home) may be independent from the extent to which they integrate home into their work domain (e.g., checking in with kids while at work).

Boundary theory (Ashforth et al., 2000; Clark, 2000; Nippert-Eng, 1996a; Nippert-Eng, 1996b) further characterizes boundaries as having two elements: flexibility, the degree to which a boundary can expand or contract, and permeability. Specifically, a boundary is flexible when individuals can enact a role in various settings and at various times, and the role is not tied to a particular place or time (e.g., a woman working in a family business might be called on to shift to the role of mother at any point or place during the day) (Ashforth et al., 2000; Clark, 2000; Hall & Richter, 1988). A boundary is permeable when it allows aspects of one domain (work or home) to enter the other domain (e.g., paying rent and bills online at work) (Ashforth et al., 2000; Clark, 2000; Pleck, 1977). In this study, rather than consider a singular boundary between work and home, I consider two boundaries—one around work and one around home. Considering each boundary separately allows for closer examination of domain-specific factors that contribute to boundary permeability more specifically with each domain.

High boundary permeability signifies that individuals integrate various aspects of one domain into the other domain whereas low boundary permeability indicates that individuals keep aspects of each domain separate. Specifically, individuals have high work boundary permeability when they constantly attend to personal matters while in the office. Conversely, they have low work boundary permeability when they focus on work tasks and rarely spend time on personal issues during office hours. Also, individuals have high home boundary permeability when they frequently work after hours at home (e.g., bring unfinished work home), whereas they have low home boundary permeability when they fully attend to home demands and keep work matters outside of the home domain.

Antecedents of Boundary Permeability

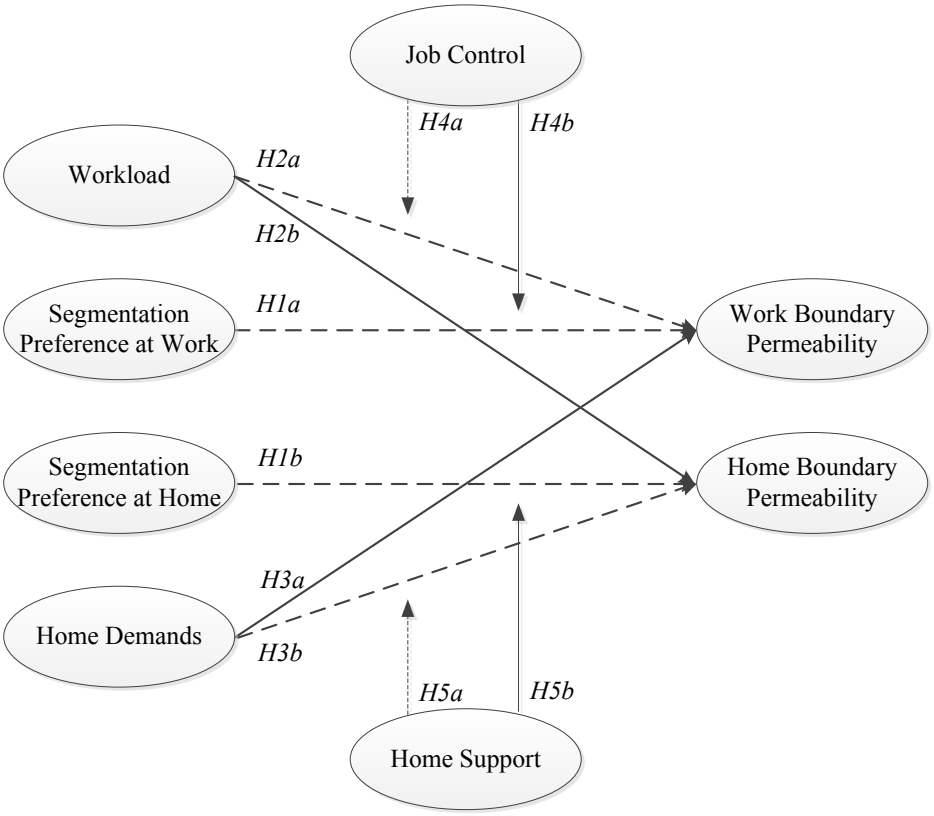
Previous research has examined such antecedents of boundary permeability as role identification and segmentation preference. First, studies examining role identification, the extent to which one defines oneself in terms of his or her role (Ashforth et al., 2000) have found that job role identification was positively related to boundary permeability at home. That is, individuals who strongly identified with their job role were more likely to spend time on work-related matters while at home (e.g., Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006). Further, drawing on the segmentation-integration model (Kreiner, 2006; Nippert-Eng, 1996b), others have investigated how individuals' preference for segmentation or integration affects boundary permeability. For example, Powell & Greenhaus (2010) found that individuals' preferred home boundaries were positively related to their actual, home boundaries. Although these individual factors were found to play a crucial role in determining boundary permeability, context may also play a role. Indeed, researchers have advocated for the need to look at multiple factors affecting boundaries between work and home domains. For example, Kossek and her colleagues (2005) argued that individuals' boundaries are shaped by the structure of the job they are in, as well as by individual differences. In support of this, the number of hours devoted to meeting work and home demands was found to relate to weak boundaries around work and home domains (Desrochers, Hilton, & Larwood, 2005).

Further, Ashforth and his colleagues (Ashforth et al., 2000) proposed that in addition to individuals factors such as role identification, researchers should pay attention to how the situation or context in which individuals work affects their boundaries. Similarly, Clark (2001) suggested that boundaries will be differentially strong depending on the characteristics of domains. For example, if a company's policy or norms (work domain) are characterized by "no personal business during office hours," employees may not be able to attend to personal matters

as needed, resulting in a strong work boundary. Therefore, in order to understand what factors contribute to different levels of boundary permeability at work and home, researchers need to examine contextual factors as well as individual differences. Thus, in this study, I examine both contextual and individual factors as antecedents and moderators of boundary permeability.

In addition to considering both individual and contextual factors, research needs to investigate how these factors affect each boundary *differently*. This approach is a response to the consistent findings that boundary permeability at work may differ from boundary permeability at home (e.g. Eagle et al., 1997; Frone et al., 1992b; Hecht & Allen, 2009). Pleck (1977) initially proposed the notion of asymmetric permeability, the extent to which demands from one domain intrude into the other domain, but not vice versa. For instance, consider an individual who rarely thinks about or deals with personal matters at work (impermeable work boundary) while, at the same time, brings unfinished work home (permeable home boundary). One can see in this example the asymmetry—intrusions at work are not allowed while those at home are. As another example, consider another individual who schedules personal activities during the work day (permeable work boundary) but rarely does work during personal time (impermeable home boundary). Once again, one can see the asymmetry. In the second example, the home-to-work intrusions are allowed, but not work-to-home ones. In support of asymmetric permeability, Hecht and Allen (2009) found individuals spent less time on personal matters at work than they did on work-related matters at home. Accordingly, when proposing factors affecting boundary permeability, I examine how they predict each boundary (work and home) differently. Figure 1, a model of the antecedents of boundary permeability overviews the relationships that I develop through hypotheses in Chapter 3.

Figure 1: A Model of the Antecedents of Boundary Permeability



Note. Straight lines represent positive relationships while broken lines represent negative ones.

Consequences of Boundary Permeability

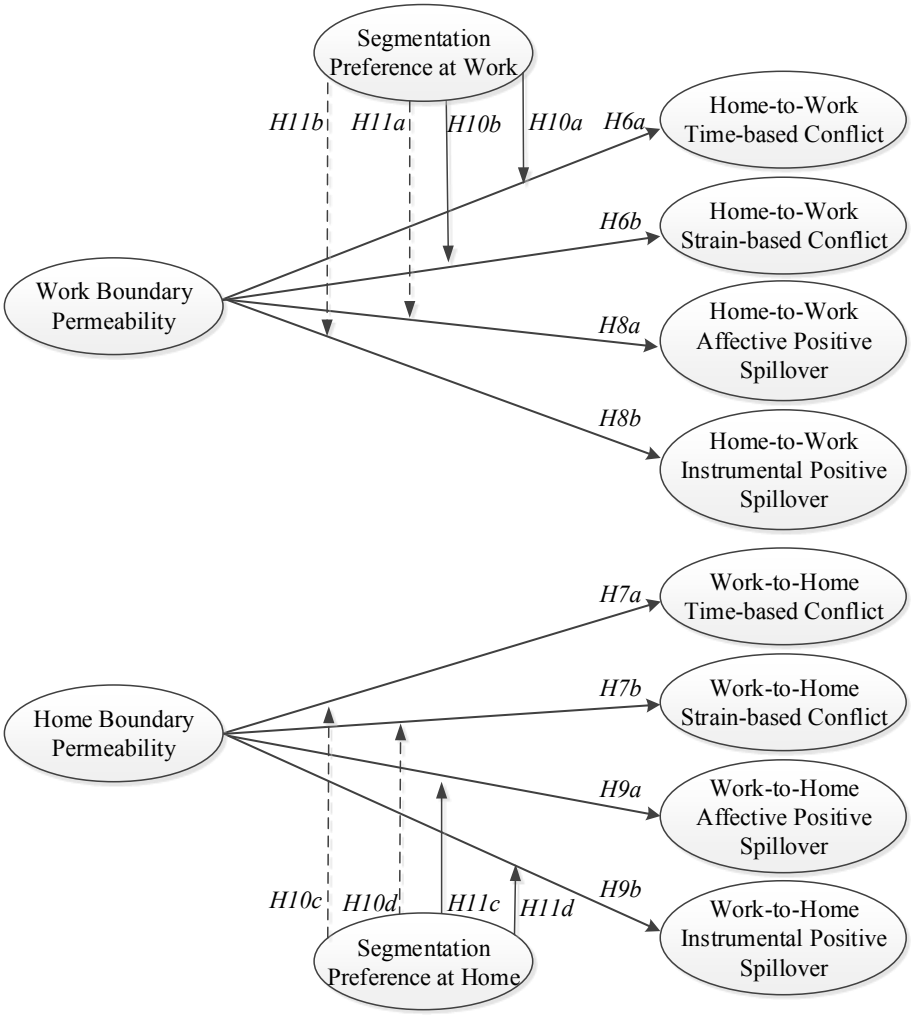
To my knowledge, only a handful of researchers have tested the consequences of boundary permeability. First, Olson-Buchanan and Boswell (2006) found that highly permeable boundaries at work and home were associated with less negative reactions to interruptions, more frequent use of communication technologies during nonwork time, and higher work-home conflict. Also, Bulger and her colleagues (Bulger et al., 2007) found that boundary permeability had a significant association with work-home conflict bi-directionally (i.e., work boundary permeability was positively related to home-to-work conflict while home boundary permeability was positively related to work-to-home conflict), but found no significant relationship with work-home enhancement in any direction. Similarly, Hecht and Allen (2009) found that work boundary permeability was positively related to family-to-work conflict[1] while home boundary permeability was positively related to work-to-family conflict. This finding reveals that individuals who spend a considerable amount of time on personal matters while at work are more likely to feel that their home responsibilities get in the way of performing their work. Also, those who frequently bring work home are more likely to feel that their work-related responsibilities get in the way of meeting home demands.

Several limitations to the studies discussed above should be noted. First, to measure work-home conflict and positive spillover, previous researchers have used a global measure, although a scale with multiple dimensions (i.e., time, strain and behavior) is available and the different dimensions could have varying relationships with study variables. Accordingly, in this study, I utilize subscales of work-home conflict (i.e., time-based and strain-based) and positive

[1] Researchers have varied in using the term "family" or "home" in describing the nonwork domain. I use the broader term "home" throughout my dissertation, except when citing other research in which the authors have used "family" in their measures.

spillover (i.e., affective and instrumental). Second, prior studies have mostly focused on the negative consequences of boundary permeability (e.g., negative reactions to interruptions and work-family conflict), although researchers have called for more attention to the positive consequences (Barnett, 2001; Frone, 2003; Parasuraman & Greenhaus, 2002). Accordingly, in this study, I examine work-home positive spillover as well as conflict. Lastly, although the relationship between boundary permeability and work-home outcomes could be stronger or weaker depending on individual or contextual characteristics (Kossek & Lautsch, 2012), possible moderators are yet to be examined. In my study, I examine individuals' segmentation preference as a possible moderator in the relationship. Figure 2 provides a model of the consequences of boundary permeability that overviews the relationships that I develop through hypotheses in Chapter 3.

Figure 2: A Model of the Consequences of Boundary Permeability



CHAPTER 3. HYPOTHESES

In this chapter, I detail hypotheses proposing relationships between boundary permeability and its antecedents and consequences. The full models to be tested are presented in Figures 1 and 2 (see Chapter 2). I first examine the antecedents in H1 through H5, and then examine the consequences in H6 through H9.

Antecedents of Boundary Permeability

In this section, I first discuss the direct effects of segmentation preference, workload, and home demands on boundary permeability, and then examine the moderating effects of job control and home support on these direct relationships. I have chosen to focus on these antecedents based on previous studies, which have suggested that boundary permeability can be affected by 1) the extent to which individuals prefer to segment or integrate their work and home domains (Kossek & Lautsch, 2007; Nippert-Eng, 1996a), 2) the levels of commitment individuals' work and home domains demand from them (Anderson, Coffey, & Byerly, 2002; Clark, 2001; Greenhaus & Parasuraman, 1999), and 3) the resources individuals have at work and home to construct and maintain their boundaries according to their preference (Kossek & Lautsch, 2007).

Direct Effect of Segmentation Preference on Boundary Permeability

Nippert-Eng (1996a) initially proposed that individuals vary in their preference for segmenting or integrating their work and home domains. Some individuals prefer to segment or keep work and home domains completely separate, while others prefer to integrate or allow elements of one domain to enter and influence the other domain. From here on in my dissertation, I use the term "segmentation" preference rather than "segmentation or integration" preference for the sake of parsimony. Therefore, "low segmentation" preference implies an individual prefers

high integration between work and home domains, and "high segmentation" preference implies a person prefers low integration between work and home domains. Researchers have studied how an individual's boundary *preference* may relate to the *actual* boundary the individual enacts. For example, Kossek and Lautsch (2007; 2012) argued that a preferred boundary will be positively related to an enacted, or actual, boundary as individuals engage in boundary work to ensure their boundary preference is met (Nippert-Eng, 1996a). That is, people who prefer segmentation may try not to check their work email after hours, and refrain from taking a personal phone call while at work. In contrast, people who prefer integration may try to blend their work and home life by frequently checking in with their family and friends during working hours and performing unfinished work while at home.

Although few empirical studies have tested the relationship between preferred and actual boundaries (Ammons, 2013), a handful of researchers have provided preliminary evidence. First, Powell and Greenhaus (2010) found that individuals' preferred home boundaries were positively related to their actual home boundaries. That is, people who preferred to segment their home domain from their work domain were more likely to live their home life in accordance with their preference. Likewise, in her qualitative study, Ammons (2013) found that the boundaries respondents preferred and actually lived were highly correlated regardless of their gender and parental status. Accordingly, I hypothesize that individuals' segmentation preference in a particular domain will be negatively associated with the actual permeability in that domain. For example, if an individual prefers that work not intrude at home (high segmentation preference), it will be likely that actual work-to-home intrusions will not be tolerated (low permeability). Unlike Powell and Greenhaus (2010) who tested preferred and actual boundaries for a home

domain exclusively, I test the relationship between preferred and actual boundaries for both the work domain and the home domain. Thus, I predict:

Hypothesis 1a. Segmentation preference at work will be negatively related to work boundary permeability. In other words, the greater the preference for segmentation at work, the less permeable the work boundary will be.

Hypothesis 1b. Segmentation preference at home will be negatively related to home boundary permeability. In other words, the greater the preference for segmentation at home, the less permeable the home boundary will be.

Direct Effect of Workload on Boundary Permeability

Domain-specific factors, or the demands placed on a person within his or her work and home domains, may affect boundary permeability. In this section, I focus on workload as a demand placed on a person in the work domain, and in the next section, I discuss demands placed on a person in the home domain. Workload is an aspect of job demands that refers to "those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort" (Schaufeli & Bakker, 2004: 296). Specifically, I focus on time demands at work, which captures the quantity of work (i.e., having too much to do within a limited amount of time) (Karasek & Theorell, 1990). When individuals have a high workload, they are more likely to be forced to perform only work-related behaviors at work simply because they have little time to be distracted. Consequently, they are less likely to allow their work boundary to be permeable, compared to someone with a lighter workload.

In addition to work boundary permeability, workload may affect home boundary permeability. Previous research has consistently found that individuals with a heavy workload have more work-to-home conflict (e.g., Clark, 2001; Frone, Yardley, & Markel, 1997;

Voydanoff, 2004). Employees who are under constant heavy work demands may bring work home to meet deadlines and fulfill their job responsibilities. As a result, a considerable number of non-work hours that are supposed to be spent meeting home responsibilities are devoted to performing unmet work duties after work hours. Thus, those with a heavy workload are more likely to allow their home boundary to be permeable. Taken together, I predict:

Hypothesis 2a. Workload will be negatively related to work boundary permeability. In other words, the greater the workload, the less permeable the work boundary will be.

Hypothesis 2b. Workload will be positively related to home boundary permeability. In other words, the greater the workload, the more permeable the home boundary will be.

Direct Effect of Home Demands on Boundary Permeability

Home demands may affect boundary permeability in a way similar to workload. Home demands are created when individuals have responsibilities, requirements, expectations, and commitments associated with family and home roles (Anderson et al., 2002). Research suggests that demanding home roles are the strongest predictors of home-to-work conflict (Greenhaus & Parasuraman, 1999) and that pressure from high home demands can inhibit or restrict full involvement in work (Anderson et al., 2002). For instance, during office hours, individuals with high home demands placed on them may have to constantly check with their family members in need, thereby taking a considerable amount of time from work. Consequently, the work boundary will become highly permeable as a result of meeting high home demands while at work.

In addition to their impact on work boundary permeability, heavy home demands may be associated with low home boundary permeability. If individuals have many home demands after work (e.g., picking up their children; doing cooking, cleaning, and laundry; participating in

family events, etc.), they likely have little time to think about and catch up with their work. Thus, I predict that high home demands will be associated with low home boundary permeability.

Hypothesis 3a. Home demands will be positively related to work boundary permeability. In other words, the greater the home demands, the more permeable the work boundary will be.

Hypothesis 3b. Home demands will be negatively related to home boundary permeability. In other words, the greater the home demands, the less permeable the home boundary will be.

Moderating Effects of Job Control and Home Support

In this section, I examine the moderating effects of job control and home support on the relationships between segmentation preferences (at work and at home) and boundary permeability, as well as on the relationships between demands (work-related and home-related) and boundary permeability.

Job control. Job control is individual autonomy over work timing and methods (Karasek & Theorell, 1990). This work-based resource may influence the relationship between workload and work boundary permeability. The demands-control model (Karasek, 1979) suggests that it is not high job demands per se but their combination with low job control that results in a high level of job strain. In support of this, empirical studies have found the moderating effect of job control on the negative relationship between job demands and employee psychological well-being (e.g., Marshall, Barnett, & Sayer, 1997; Van Yperen & Snijders, 2000; Wall, Jackson, Mullarkey, & Parker, 1996). That is, individuals with high job control are more likely to have discretion to decide when and how to work, thereby reducing the deleterious effect of job demands.

Similarly, I expect that having high job control may attenuate the effects of workload. Individuals with a heavy workload may be able to arrange their work in such a way that they can still take care of personal matters during a busy work day. Although individuals cannot change the absolute amount of workload, if they have control over when and how to work, they may be able to find more creative ways to perform their tasks, adjust the intensity of working, and construct their daily work schedules in a more efficient manner. Consider, for example, computer programmers whose job is to build their company's website during a specific timeline and whose workload is relatively heavy. Given the latitude to decide when and how to work, they may develop creative shortcuts that would not be possible in an environment in which jobs and tasks were more tightly prescribed and fixed. Being able to perform their jobs in an effective and innovative way may allow them to build in windows for personal time even with a heavy workload. However, if their day-to-day schedules and deliverables are strictly dictated by their manager, they may find it hard to veer from these strict dictates and distance themselves from work demands enough to deal with personal matters while at work. Thus, I predict that, relative to employees with low job control, those with high job control are more likely able to spend some of their office hours on personal matters even if their workload is heavy.

Hypothesis 4a. Job control will moderate the negative relationship between workload and work boundary permeability such that the relationship will be weaker when job control is high.

Job control may also influence the relationship between segmentation preference at work and work boundary permeability. Previous research has suggested that contextual factors may affect the ability of individuals to enact a boundary as they desire. First, Ashforth and his colleagues (2000) proposed that situational constraints will affect individuals' ability to enact

their work-home boundary preferences. Behaviors resulting from individual differences (e.g., segmentation preference) are likely to be inhibited by highly constraining, or strong situations, whereas they are more likely to be manifest in situations in which there is less of a situational constraint (Mischel, 1977). When organizations maintain a strict policy banning their employees from taking care of their personal life while at work, for example, the employees are more likely to be forced to enact a boundary that deviates from what they prefer. Ammonds (2013) further suggests that structural conditions and norms present in the workplace and at home will affect the alignment between preferred and actual boundaries. The presence of on-site daycare or having a home office, for example, might render one's work and home boundaries more or less permeable than he or she prefers. Overall, research suggests that situational characteristics may affect one's ability to enact boundaries as desired. In particular, job control, as one of the situational factors in the work domain, may influence individuals' ability to enact the boundary they prefer. Relative to individuals with a high level of job control, those with a low level of job control may not be able to create and maintain their work boundary as they prefer due to a lack of discretion to choose how and when to work during office hours.

Further, Kossek and Lautsch (2007; 2012) stressed that perceived boundary control, an individual's sense that he or she can control what crosses the boundary between work and home and when, will play a vital role in the alignment between preferred and actual boundaries. Job control can be viewed as one aspect of perceived boundary control in that when an individual is able to control the job, he or she also has the discretion to set and maintain when and where work is done. Thus, a high level of perceived boundary control in the form of job control may allow individuals to enact their work boundary as they desire.

Hypothesis 4b. Job control will moderate the negative relationship between segmentation preference at work and work boundary permeability such that the relationship will be stronger when job control is high.

Home support. Home support is the amount of instrumental and emotional support one receives from family and friends (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). These home-based resources may influence the relationship between home demands and home boundary permeability. Some examples of home support are when a spouse takes on extra household responsibilities for his/her partner when the latter has a busy work schedule. A recent meta-analysis (Michel et al., 2011) found that high home support was related to reduced home-to-work conflict. This finding suggests that individuals who receive substantial home support experience a reduction in role pressures within the home domain. As a result of reduced home role pressures enabled by high home support, the individuals may be able to spend some time on work-related matters while at home. Thus, I predict that home support will moderate the negative relationship between home demands and home boundary permeability. That is, relative to someone with little support at home, when home support is high, individuals are more likely able to spend some of their time at home on work-related matters even when their home demands are substantial.

Hypothesis 5a. Home support will moderate the negative relationship between home demands and home boundary permeability such that the relationship will be weaker when home support is high.

Depending on the availability of resources at home, individuals may or may not enact a home boundary as they desire. As discussed before, previous research suggests that perceived boundary control affects the ability of individuals to create a boundary as they prefer (Kossek &

Lautsch, 2007; 2012). Resources in the form of home support can afford individuals perceived boundary control in a home domain. That is, when one has support from others in the home domain, he or she may be better able to relinquish home-related responsibilities to tackle work-related ones while at home. In other words, supported individuals may be better able to create an actual home boundary aligned with their preferences. For instance, when their spouses or friends can provide instrumental help as needed, people who prefer to integrate work and home lives are more likely to engage in work while at home as they prefer, leading to the alignment between preferred and actual boundaries. In the case of people who prefer to segment work and home lives, they also may be able to create an actual home boundary as they desire if home support is provided. They may be able to keep work from spilling over into home because they have resources available to help them draw the line and resist the temptation to do work at home. Thus, I predict that home support will moderate the relationship between segmentation preference at home and home boundary permeability.

Hypothesis 5b. Home support will moderate the negative relationship between segmentation preference at home and home boundary permeability such that the relationship will be stronger when home support is high.

Consequences of Boundary Permeability

In this section, I discuss consequences of boundary permeability, including work-to-home and home-to-work conflict. I then argue for the direct effects of boundary permeability on these forms of conflict as well as on positive spillover across domains. Finally, I discuss the moderating effect of segmentation preferences (at work and at home) on these direct relationships.

Cross-Domain Conflict

Work-home conflict was originally operationalized as a unidimensional variable, but in a growing number of studies (Carlson et al., 2000; Hecht & Allen, 2009) it is explicitly regarded as bi-directional and measured by two distinct variables: work-to-home conflict (i.e., work interference with home) and home-to-work conflict (i.e., home interference with work). Greenhaus and Beutell (1985) further delineated work-home conflict into three types: time-based; strain-based; and behavior-based. Time-based conflict occurs when devoting time to the demands of one domain leaves the person little time to meet the demands of the other domain. Strain-based conflict occurs when fatigue or exhaustion individuals experience as a result of stressors from one domain affects their performance in the other domain. Lastly, behavior-based conflict occurs when behavior developed in one domain is not compatible with behavior expected in the other domain. Regarding behavior-based conflict, Carlson and her colleagues (2000) pointed to its conceptual and empirical inadequacy. Also, Powell and Greenhaus (2010) dropped the behavior-based scale in their measurement model due to its low reliability ($\alpha = .51$). Accordingly, in this study, I focus on time-based and strain-based conflict, which are more distinct conceptually and for which measures have been validated (Carlson et al., 2000).

As noted earlier, previous studies have found that high work boundary permeability was associated with high home-to-work conflict while high home boundary permeability was related to high work-to-home conflict (e.g., Bulger et al., 2007; Hecht & Allen, 2009; Olson-Buchanan & Boswell, 2006). Thus, I replicate these previous studies in predicting the relationship between boundary permeability and both types of conflict. However, rather than utilizing a global measure of work-home conflict as these authors did, I use a measure of conflict that includes both time-based and strain-based dimensions, which will allow me to tease out possible nuances in particular types of cross-domain conflict.

Direct Effect of Work Boundary Permeability on Home-to-Work Conflict

First, I predict that work boundary permeability will be positively related to *time-based* home-to-work conflict. Individuals who frequently have to take care of personal matters while at work may not be able to devote enough time to work because personal matters consume a considerable portion of their work day. When work is frequently interrupted by personal matters, individuals may be slowed down at work due to having to recover from the interruptions. They will have to relearn essential details of the tasks to get into "work mode" again, leading to additional loss of work time (Jett & George, 2003). In addition to time-based conflict, individuals who experience home-related interruptions while at work are more likely to experience *strain-based* home-to-work conflict because of the added burden on their physical and emotional systems created when home intrudes on work (de Jonge & Dormann, 2007; Meijman & Mulder, 1998). Dealing with personal issues during office hours could produce additional fatigue, tension, and frustration (Greenhaus & Beutell, 1985), and drain personal resources (e.g.., mental or physical capacity), further interfering with work-role performance (Edwards & Rothbard, 2000). In other words, in situations in which home intrudes on work, the work boundary is permeable. As a result of this permeability, work time is lost (creating time-based pressure) and individuals experience strain from juggling both home and work (creating strain-based pressure). Accordingly, I predict that high work boundary permeability will be related to greater time-based and strain-based home-to-work conflict.

Hypothesis 6a. Work boundary permeability will be positively related to home-to-work time-based conflict. In other words, the more permeable work boundary, the more home-to-work time-based conflict will be.

Hypothesis 6b. Work boundary permeability will be positively related to home-to-work strain-based conflict. In other words, the more permeable work boundary, the more home-to-work strain-based conflict will be.

Direct Effect of Home Boundary Permeability on Work-to-Home Conflict

In a similar way, I also predict that high home boundary permeability will be related to greater time-based and strain-based work-to-home conflict. First, time-based work-to-home conflict may result when one's home boundary is highly permeable. When individuals have to respond to work emails or phone calls from colleagues and clients frequently while at home, they may not have enough time to devote to meet home responsibilities. In addition, individuals are more likely to experience strain-based work-to-home conflict when their home boundary is highly permeable. When individuals have to take care of work after hours, work-related stressors may produce strain symptoms (e.g., anxiety, fatigue) that reduce their ability to meet home demands (Greenhaus & Beutell, 1985) and maintain relationships at home. Thus, I predict:

Hypothesis 7a. Home boundary permeability will be positively related to work-to-home time-based conflict. In other words, the more permeable home boundary, the greater work-to-home time-based conflict will be.

Hypothesis 7b. Home boundary permeability will be positively related to work-to-home strain-based conflict. In other words, the more permeable home boundary, the greater work-to-home strain-based conflict will be.

Cross-Domain Positive Spillover

Work-home researchers are increasingly turning their attention to positive interdependencies between work and home domains (e.g., Edwards & Rothbard, 2000; Greenhaus & Powell, 2006; Grzywacz, 2002). One phenomenon increasingly drawing interest is

work-home positive spillover, which has its roots in the enhancement perspective of role theory (Katz & Kahn, 1978). This work has suggested that occupying multiple roles (at work and at home) can be beneficial in that aspects from one domain can enhance or enrich one's experience in another domain. For example, a professor who is also a parent may carry over his or her nurturing behaviors to students at work enhancing the teaching part of the job, and his or her teaching skills may enrich his or her ability to help a child at home with schoolwork. Edwards and Rothbard (2000) broadly delineated positive spillover into affective and instrumental facets. *Affective* positive spillover occurs when positive affect (e.g., satisfaction) from one domain is transferred to the other domain in a way that benefits the other domain, while *instrumental* positive spillover occurs when positive values (e.g., diligence), behaviors (e.g., helping), and skills (e.g., problem-solving) from one domain are transferred to the other domain in a way that benefits the other domain (Hanson et al., 2006).

Direct Effect of Work Boundary Permeability on Home-to-Work Positive Spillover

Individuals with high work boundary permeability may experience home-to-work positive spillover. According to identity theory (Ashforth & Johnson, 2001), individuals who keep home separate from work tend to psychologically compartmentalize their domain-specific identities. In this situation, individuals tend to actively suppress home-related thoughts, feelings and behaviors while at work (low work boundary permeability) (Piotrkowski, 1979), thereby decreasing the chances of experiencing affective and instrumental positive spillover. Conversely, when individuals maintain a highly permeable work boundary, they are more likely to experience positive spillover by allowing the elements from the home domain to spill over in a way that enriches the work domain. For example, employees who frequently make phone calls to family members while at work are more likely to experience the transfer of positive feelings (e.g., joy,

peace) that they experienced at home to work. These employees are more likely to experience affective spillover in that the positive affect transferred from the home domain may help them to be more psychologically available for the work domain (Marks, 1977; Rothbard, 2001). Note that while negative emotions may also cross over, my focus here is on positive spillover. In addition to affective spillover, individuals with a highly permeable work boundary are more likely to experience home-to-work instrumental spillover. Under a highly permeable work boundary, values, skills, and behaviors from the home domain are more likely to enter into the work domain. In this situation, individuals may be better able to leverage the spilled-over elements from the home domain in a way that benefits the other domain (Edwards & Rothbard, 2000). However, if individuals maintain low work boundary permeability, they are less likely to apply skills or values developed in the home domain to benefit the work domain. For example, a manager who tries to leave his personal life outside of the workplace may not capitalize on values developed in the home domain, such as empathy and compassion. These crossover emotions could help him become a better leader by considering his employees' feelings and needs; however, no positive spillover occurs. Thus, I predict that work boundary permeability will be positively related to affective and instrumental home-to-work positive spillover.

Hypothesis 8a. Work boundary permeability will be positively related to home-to-work affective positive spillover. In other words, the more permeable the work boundary, the greater home-to-work affective positive spillover will be.

Hypothesis 8b. Work boundary permeability will be positively related to home-to-work instrumental positive spillover. In other words, the more permeable the work boundary, the greater home-to-work instrumental positive spillover will be

Direct Effect of Home Boundary Permeability on Work-to-Home Positive Spillover

In a similar way, individuals with a highly permeable home boundary are more likely to experience work-to-home positive spillover. First, when a home boundary is highly permeable, affective positive spillover is more likely from the work domain to the home domain. According to boundary and identity theories (Ashforth et al., 2000; Ashforth & Mael, 1989; Nippert-Eng, 1996a), individuals who integrate their work life with their home life tend to blend their identities in the work and home domains. Blending work identity and home identity, or maintaining a consistent identity across domains, may lead to more affective positive spillover. For example, if I identify as a sports enthusiast, I will share this aspect of myself with my colleagues and experience positive affect at work. This positive affect will come home with me, rather than being checked at the door, because my sports enthusiast identity is equally present in both domains. Similarly, when I communicate with supportive and considerate colleagues, the positive affect I feel, such as joy and gratitude, will put me in a good mood when I return home and interact with my family members. In addition, instrumental positive spillover from the work domain to the home domain may result from a highly permeable home boundary. Individuals who keep work life separate from home life may not realize the value of applying the qualities developed in the work domain to the home domain (Greenhaus & Powell, 2006; Powell & Greenhaus, 2010). In this situation, they are less likely to transfer values, skills, and behaviors from the work domain to the home domain in a way that enriches home life. Thus, I predict:

> *Hypothesis 9a. Home boundary permeability will be positively related to work-to-home affective positive spillover. In other words, the more permeable the home boundary, the greater work-to-home affective positive spillover will be.*

Hypothesis 9b. Home boundary permeability will be positively related to work-to-home instrumental positive spillover. In other words, the more permeable the home boundary, the greater work-to-home positive spillover will be.

Moderating Effects of Segmentation Preference

Segmentation preference may influence the relationship between boundary permeability and positive and negative consequences felt in the work and home domains. First, high boundary permeability may lead to greater cross-domain conflict when the individuals prefer *segmentation*. Compared to individuals who prefer integration, those who prefer segmentation may find highly permeable boundaries more stressful because, despite their desire to keep work and home lives separate, their actual work and home lives are integrated. The gap between what people desire and actually have regarding work-home boundary likely leads individuals to experience unfulfilled needs and dissatisfaction, leading to tension and conflict (Edwards & Rothbard, 1999). In support of this view, Kreiner and his colleagues (2009), in their qualitative study with Episcopal priests, found that when the priests felt their preferred boundaries were frequently violated by their parishioners they were more likely to experience work-home conflict. Therefore, I predict that greater cross-domain conflict may result from high boundary permeability when the individuals prefer segmentation. Specifically, the positive relationship between *work* boundary permeability and home-to-work conflict will be stronger when a segmented *work* boundary is preferred while the positive relationship between *home* boundary permeability and work-to-home conflict will be stronger when a segmented *home* boundary is preferred.

Hypothesis 10a: Segmentation preference at work will moderate the positive relationship between work boundary permeability and home-to-work time-based conflict such that the relationship will be stronger when segmentation preference at work is high.

Hypothesis 10b: Segmentation preference at work will moderate the positive relationship between work boundary permeability and home-to-work strain-based conflict such that the relationship will be stronger when segmentation preference at work is high.

Hypothesis 10c: Segmentation preference at home will moderate the positive relationship between home boundary permeability and work-to-home time-based conflict such that the relationship will be stronger when a segmentation preference at home is high.

Hypothesis 10d: Segmentation preference at home will moderate the positive relationship between home boundary permeability and work-to-home strain-based conflict such that the relationship will be stronger when segmentation preference at home is high.

In contrast, high boundary permeability may lead to greater cross-domain positive spillover when individuals prefer *integration*. Compared to individuals who prefer segmentation, those who prefer integration may view highly permeable boundaries more positively because they allow them to maintain highly integrated work and home lives as they desire. Thus, they may embrace cross-domain positive spillover. Consider, for example, a professor whose home life is highly permeable so that he or she constantly switches between doing work (e.g., working on research projects, communicating with colleagues) and fulfilling home responsibilities (e.g., playing with kids, doing chores) while at home. If the professor prefers segmentation, he or she may find this highly integrated home life stressful, and in turn, is less likely to experience positive spillover. If he or she prefers integration, however, it may feel more satisfying and less stressful, and in turn, may increase the experience of positive spillover. Therefore, I predict that greater cross-domain positive spillover will result from high boundary permeability when the individuals prefer integration. Specifically, the positive relationship between *work* boundary permeability and home-to-work positive spillover will be stronger when an integrated *work*

boundary is preferred while the positive relationship between *home* boundary permeability and work-to-home positive spillover will be stronger when an integrated *home* boundary is preferred.

Hypothesis 11a: Segmentation preference at work will moderate the positive relationship between work boundary permeability and home-to-work affective positive spillover such that the relationship will be stronger when segmentation preference at work is low.

Hypothesis 11b: Segmentation preference at work will moderate the positive relationship between work boundary permeability and home-to-work instrumental positive spillover such that the relationship will be stronger when segmentation preference at work is low.

Hypothesis 11c: Segmentation preference at home will moderate the positive relationship between home boundary permeability and work-to-home affective positive spillover such that the relationship will be stronger when segmentation preference at work is low.

Hypothesis 11d: Segmentation preference at home will moderate the positive relationship between home boundary permeability and work-to-home instrumental positive spillover such that the relationship will be stronger when segmentation preference at work is low.

CHAPTER 4. METHOD

Design

I collected data using two surveys with a one-week time lag between them. Specifically, I measured the antecedents (segmentation preference, workload, home demands) of boundary permeability, the moderators (job control, home support) of the antecedents and the control variables at Time 1, and measured boundary permeability and the consequences (cross-domain conflict and positive spillover) of boundary permeability at Time 2. In this design, I tested the relationships between the antecedents (Time 1) and boundary permeability (Time 2), one week later, and tested the relationships between boundary permeability (Time 2) and consequences (Time 2) at the same time.

I decided on a one-week period between survey administrations based on the nature of the relationships between the antecedents and boundary permeability in my study. A longer period of time between survey administrations is not suitable because I am interested in testing the specific and current effects of my predictors on boundary permeability. For example, a longer timeframe would not capture the effect of the current level of workload on boundary permeability because workload could change on a short-term basis. Thus, I believed that one week would be a reasonable interval in that it would allow me to measure my antecedents and boundary permeability separately, yet ensure that relevant effects could still be tested. However, consequences were measured at the same time as boundary permeability, making their relationships vulnerable to common method variance (Podsakoff et al., 2003).

Sample and Procedure

This study was conducted in an information technology company, an affiliated organization of a national grocery chain headquartered in the Midwestern United States. I used a

web-based survey tool to administer two surveys (Time 1 and Time 2), with a one-week interval between them. Participants were asked to fill out a survey anonymously and received a $10 gift card in return for their participation. I emailed the first online survey on Monday to 531 employees who the company randomly selected from their approximately 1,000 employees. A total of 348 employees responded to the survey (66 percent response rate). I emailed a second survey to these 348 employees on the following Monday, and a total of 323 employees responded (93 percent response rate). Therefore, the overall response rate was 61%. I eliminated surveys with a large amount of missing data, which resulted in 308 employees as the final sample size. Respondents' mean age was 44.0 years, and their mean organizational tenure was 12.2 years. The mean number of children aged 18 or under living with them was .9, and their mean household income was $87,500. Additionally, 72.4 percent of the sample were male; 90.6 percent were Caucasian; and 75.3 percent were married. The highest degree earned was a graduate degree for 21 percent of the respondents, an undergraduate degree for 47 percent, and a lesser degree (e.g., associate degree, high school degree) for 32 percent of respondents. Lastly, a majority of the respondents worked in an information technology function (82%), and held a non-supervisory position (87%).

Measures

For all the items in the measures below, agreement with the items was assessed using 5-point Likert scale anchored by 1="strongly disagree (not at all)" and 5="strongly agree (very much)". Table 1 contains a full list of items for each measure in my study, as well as the sources from which they were derived and/or adapted. As noted earlier, antecedents were measured at Time 1 while boundary permeability and consequences were measured at Time 2 (a week later). For the antecedents, respondents were asked to respond to questions in reference to the coming

week (i.e., *Thinking about the coming week*...), while for boundary permeability and consequences, respondents were asked to respond to questions in reference to the past week (i.e., *Reflecting on the past week*...). Segmentation preference, however, was measured in general terms without the timeframe since the literature views it as a relatively stable trait (Hecht & Allen, 2009; Kreiner, 2006; Rothbard, Phillips, & Dumas, 2005).

Segmentation preference. This variable was assessed using items developed by Kreiner (2006) along two dimensions: segmentation preference at work and segmentation preference at home. The original measure included only items to capture segmentation preference in general; so, I adapted the items to measure the construct for both work and home domains, with four items used to measure each domain. These items were averaged to yield scores for segmentation preference at work ($\alpha = .84$) and segmentation preference at home ($\alpha = .90$). Since the measures for work and home domains were created by adapting a measure assessing the construct in general, I conducted a confirmatory factor analyses (CFA) to assess the merits of the segmentation preference at work and home distinction. The analyses showed that the fit of a two-factor measurement model was significantly better than the fit of a one-factor model ($\Delta\chi^2 = 179.65$, $\Delta df = 1$, $p < .001$), supporting the distinctiveness of the two measures.

Workload. This variable was measured using five items from Karasek's (1985) job content scale. This scale refers to the quantity of work required, as well as demanding aspects of the job. These items were averaged to yield a workload score ($\alpha = .74$).

Home demands. This variable was measured using four items developed by Yang (1993), originally called the family demand scale. I adapted the items to refer to "home" more generally. These items were averaged to yield a home demands score ($\alpha = .86$).

Job control. Job control was assessed using three items taken from Spreitzer (1995). Respondents were asked to indicate the extent to which they have autonomy, control, and influence in doing their job and on their work situation. These items were averaged to yield a job control score (α = .87).

Home support. This variable was assessed using three items developed by Etzion (1984). Respondents were asked to indicate the degree to which they agreed that they received a variety of resources in their home life. These items were averaged to yield a home support score (α = .75).

*Boundary permeability***.** This variable was assessed along two dimensions—work boundary permeability and home boundary permeability. For work boundary permeability, I used items developed by Hecht and Allen (2009). For home boundary permeability, I adapted these items to change the focus from "work" to "home." Respondents were asked to indicate the extent to which they agreed with eight items that represented boundary permeability at work, and eight items that represented boundary permeability at home. These items were averaged to yield scores for work boundary permeability (α = .80) and home boundary permeability (α = .89).

Cross-domain conflict. Work-to-home conflict and home-to-work conflict were measured along two dimensions—time-based conflict (3 items), and strain-based conflict (3 items) for both conflict directions—using a modified version of the Carlson, Kacmar, and Williams (2000) work-family conflict instrument. Items were adapted to reflect the home domain more generally, rather than family more specifically. These items were averaged to yield scores for work-to-home time-based (α = .92) and strain-based conflict (α = .94) and home-to-work time-based (α = .80) and strain-based conflict (α = .91). I conducted CFAs to assess the merits of the distinction among the four measures. According to the CFAs, a four-factor model with three

time-based work-to-home conflict items, three strain-based work-to-home conflict items, three time-based home-to-work conflict items, and three strain-based home-to-work conflict items fit the data better than a one-factor or a two-factor model (no distinction for directionality or time- and strain-based dimensions) ($\Delta\chi^2$ = 625.21 to 1456.86 , Δdf = 5 to 6, $p < .001$, in all cases) and had acceptable fit indices (CFI = .98, RMSEA = .05, SRMR = .04). These results confirmed that the four dimensions were distinct and appropriate to include as separate variables in further analysis.

Cross-domain positive spillover. This variable was measured along two dimensions—affective positive spillover (4 items) and instrumental positive spillover (6 items) for both positive spillover directions—using a modified version of Hanson et al.'s (2006) measure of work-family positive spillover. Items were adapted to reflect the home domain more generally, rather than family more specifically. These items were averaged to yield scores for work-to-home affective (α = .94) and instrumental (α = .91) positive spillover and home-to-work affect (α = .95) and instrumental (α = .91) positive spillover. According to the CFAs, a four-factor model with four affective work-to-home spillover items, six instrumental work-to-home spillover items, four affective home-to-work spillover items, and six instrumental home-to-work spillover items fit the data better than a one-factor or a two-factor model (no distinction for directionality or affective and instrumental dimensions) ($\Delta\chi^2$ = 1395.07 to 1395.07 , Δdf = 5 to 6 , $p < .001$, in all cases) and had acceptable fit indices (CFI = .95, RMSEA = .07, SRMR = .05). These results confirmed that the four dimensions were distinct and appropriate to include as separate variables in further analysis.

Control variables. I included an array of control variables that have been demonstrated to relate to one or more outcome variables in my study (i.e., boundary permeability, work-to-home

conflict, work-to-home positive spillover). First, I controlled for age because life stage may affect work and home boundary permeability and the consequences of boundary permeability I was testing (Friedman & Greenhaus, 2000). Second, I also controlled for household income and organizational level because they capture levels of career success that may influence the levels of job control respondents experience, as well as subjective feelings of cross-domain conflict and positive spillover (DiRenzo, Greenhaus, & Weer, 2011; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006; Parasuraman & Simmers, 2001). Lastly, I included several demographic variables—gender, marital status, and number of children 18 or under living with a respondent—for these reasons: (1) these variables have been frequently used as control variables in work-home research due to their relationship with work-home outcomes (Frone, Russell, & Cooper, 1992a; Kreiner, 2006; Powell & Greenhaus, 2010); and (2) they have potential to influence boundary permeability due to their close relationships with nonwork commitments.

Table 1: Survey Measures

Segmentation Preference (Adapted from Kreiner, 2006)
Below are several statements that describe how individuals prefer to balance work and home. Indicate the extent to which you agree.
Segmentation preference at work
1. I don't like to have to think about home while I'm at work.
2. I prefer to keep home life at home.
3. I don't like home issues creeping into my work life.
4. I like to be able to leave home behind when I come to work.
Segmentation preference at home
1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.

Workload (Karasek, 1985)
Thinking about the COMING WEEK, please choose the response that will likely reflect your situation at work. In the coming week…
1. My job will require me to work very fast.
2. My job will require me to work very hard.
3. I will not be asked to do an excessive amount of work. (R)
4. I will have enough time to get the job done. (R)
5. I will be free from conflicting demands that others make. (R)

Home Demands (Yang, 1993)
Thinking about the COMING WEEK, please choose the response that will likely reflect your situation AFTER HOURS.
1. How much time do you anticipate spending on home-related activities such as taking care of children or other, cooking, laundry, house cleaning, yard work, etc.?
2. How much do you anticipate that your home duties and responsibilities will make you feel tired out?
3. How much do you anticipate that you will feel short of time for these home-related activities?
4. How much difficulty do you anticipate doing everything you should for your home life?

Job Control (Spreitzer, 1995)
Thinking about the COMING WEEK, please choose the response that will likely reflect your situation at work. In the coming week...
1. I will have significant autonomy in determining how I do my job.
2. I will be able to decide on my own how to go about doing my work.
3. I will have considerable opportunity for independence and freedom in how I do my job.

Home Support (Etzion, 1984)
Thinking about the COMING WEEK, how much do you anticipate each of the following being present in your HOME life?
1. Opportunity to "take time off" when in need?
2. Sharing of duties?
3. Sharing of responsibilities?

Boundary Permeability (Adapted from Hecht & Allen, 2009)
Reflecting on the PAST WEEK, indicate the extent to which you agree with each of the following statements.
Work boundary permeability
1. When working, I focused completely on work-related issues. (R)
2. I left my personal life outside of the workplace. (R)
3. I scheduled personal activities (e.g., exercise or reading) during "business hours."
4. I spent time communicating with friends and family during "business hours."
5. I rarely dealt with personal matters while working. (R)
6. My office was reserved for doing work only. (R)
7. I did personal errands on "work time."
8. I thought about my personal life while working.
Home boundary permeability
1. When I was at home, I focused completely on home-related issues. (R)
2. I left my work life outside of home. (R)
3. I spent time communicating with colleagues and clients during "home hours."
4. I scheduled work-related activities (e.g., calls or meetings) during "home hours."
5. I rarely dealt with work-related matters when I was at home. (R)
6. My home was reserved for tending to home-related matters only. (R)
7. I did work tasks during "home time."
8. I thought about my work life when I was at home.

Cross-Domain Conflict (Adapted from Carlson, Kacmar, & Williams, 2000)
Below are several statements that describe how individuals balance work and life. Reflecting on the PAST WEEK, indicate the extent to which you agree.
Work-to-home conflict
<u>Time-based</u>
1. My work kept me from my home activities more than I would like.
2. The time I must devote to my job kept me from participating equally in home responsibilities and activities.
3. I had to miss home activities due to the amount of time I spent on work responsibilities.
<u>Strain-based</u>
4. When I got home from work I was too frazzled to participate in home activities/ responsibilities.
5. I was so emotionally drained when I got home from work that it prevented me from contributing to my home.
6. Due to all the pressures at work, when I came home I was too stressed to do the things I enjoy.

Home-to-work conflict

Time-based

1. The time I spent on home responsibilities interfered with my work responsibilities.
2. The time I spent at home caused me not to spend time in activities at work that could be helpful to my career.
3. I had to miss work activities due to the amount of time I spent on home responsibilities.

Strain-based

4. Due to stress at home, I was preoccupied with home matters at work.
5. Because I was stressed from home responsibilities, I had a hard time concentrating on my work.
6. Tension and anxiety from my home life weakened my ability to do my job.

Cross-Domain Positive Spillover (Adapted from Hanson, Hammer, & Colton, 2006)

Below are several statements that describe how individuals balance work and life. Reflecting on the PAST WEEK, indicate the extent to which you agree.

Work-to-home positive spillover

Affective

1. When things went well at work, my outlook regarding my home life was improved.
2. Being in a positive mood at work helped me to be in a positive mood at home.
3. Being happy at work improved my spirits at home.
4. Having a good day at work allowed me to be optimistic at home.

Instrumental

5. Skills developed at work helped me in my home life.
6. Successfully performing tasks at work helped me to more effectively accomplish home tasks.
7. Behaviors required by my job led to behaviors that assisted me in my home life.
8. Carrying out my home responsibilities was made easier by using behaviors performed at work.
9. Values developed at work made me a better home member.
10. I applied the principles of my workplace values in home situations.

Home-to-work positive spillover

Affective

1. When things went well in my home life, my outlook regarding my job was improved.
2. Being in a positive mood at home helped me to be in a positive mood at work.
3. Being happy at home improved my spirits at work.
4. Having a good day at home allowed me to be optimistic at work.

Instrumental

5. Skills developed in my home life helped me in my job.
6. Successfully performing tasks in my home life helped me to more effectively accomplish tasks at work.
7. Behaviors required in my home life led to behaviors that assisted me at work.
8. Carrying out my work responsibilities was made easier by using behaviors performed as part of my home life.
9. Values developed at home made me a better employee.
10. I applied the principles of my home values in work situations.

Analytic Approach

I used AMOS 22 software to conduct structural equation modeling (SEM) to test my hypotheses. As a powerful multivariate technique, SEM allows researchers to examine complex relationships between multiple independent and dependent variables (Byrne, 2001). Given the two data collection points and multiple variables, SEM allowed for better inferences about the interrelationships among the variables under study by testing them simultaneously and providing the overall fit indices of the hypothesized model (James & Brett, 1984; Kline, 2011).

I adopted the two-step SEM strategy suggested by Anderson and Gerbing (1988). According to this strategy, I used a measurement model to assess the structure of the observed measures, then I performed SEM based on the measurement model to assess the fit of the hypothesized model to the data. To gauge the model fit, I reported the following statistics: chi-square (χ^2), the comparative fit index (CFI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). I considered CFA and SEM acceptable if CFI was .90 or greater (Medsker, Williams, & Holahan, 1994); SRMR was less than .10 (Kline, 2011); and RMSEA was .08 or less (Browne & Cudeck, 1989).

I employed single-indicator SEM with reliability correction. The use of a single indicator for each variable has the advantage of making the ratio of sample size to estimated parameters more favorable while producing the same results as SEM models that employ multiple indicators (Sass & Smith, 2006). Specifically, I averaged the items to form a single indicator for each latent variable, and to adjust for measurement error, I fixed the path from the indicator to the corresponding latent variable to 1 while setting the error term of each indicator to 1 minus reliability times the indicator's variance (Hayduk, 1987).

Similarly, moderation was tested within SEM according to prior recommendations (Cortina, Chen, & Dunlap, 2001). First, the single indicators of the relevant variables (job control, home support, workload, home demands, segmentation preference at work, segmentation preference at home, work boundary permeability and home boundary permeability) were mean-centered to reduce multicollinearity, and product terms were created using these centered scales (Cohen, Cohen, West, & Aiken, 2003; Cortina et al., 2001). These product terms were used as single indicators for the latent product variables, with error variances set to this formula: $[1 - \alpha] \times$ variance. This alpha was calculated using Equation 14 in Cortina et al., (2001): $[(reliability_x \times reliability_z) + r^2_{xz}]/[1 + r^2_{xz}]$.

CHAPTER 5. RESULTS

In this chapter, I report the results of measurement and structural equation models in testing the hypotheses in my study. I first discuss the results for the antecedents of boundary permeability and then discuss results for the consequences of boundary permeability. Table 2 provides the descriptive statistics and correlations for the variables in the study. The mean of home boundary permeability (M = 3.00) was higher than that of work boundary permeability (M = 2.43), and the correlation between the two variables was not significant ($p > .05$). Most of the antecedents were correlated with boundary permeability in the expected direction. In terms of consequences, boundary permeability was highly correlated with work-home conflict, but not with positive spillover.

TABLE 2
Descriptive Statistics and Correlations

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Control variables																								
1. Age	44.02	11.226																						
2. Gender	1.73	.44	.00																					
3. Relationship	1.75	.43	.12*	.09																				
4. Kids	.93	1.14	-.04	.06	.29**																			
5. Household income	4.132	1.00	.31**	.03	.50**	.13*																		
6. Organizational level	1.22	.70	-.04	-.05	.00	-.04	.09																	
Antecedents (T1)																								
7. Segmentation preference at work	3.59	.78	.05	.02	.00	-.08	.00	.06																
8. Segmentation preference at home	4.05	0.78	.02	-.01	-.01	-.06	-.02	-.12*	.23**															
9. Workload	3.30	.64	-.00	-.10	.02	.03	.10	-.04	.03	-.02														
10. Home demands	3.34	1.01	-.09	-.24	.15**	.29**	.13*	-.11	-.09	.17**	.28**													
11. Job control	3.77	.74	-.09	-.01	.05	.03	.18**	.09	.11*	-.13	-.24	-.07												
12. Home support	3.26	.81	.03	.09	.36**	.13*	.20**	.07	-.08	.00	-0.11	-.16	.08											
Boundary Permeability (T2)																								
13. Work boundary permeability	2.43	.57	-.18**	.07	-.01	.21**	-.05	-.09	-.37**	.01	-.13*	.21**	.05	-.01										
14. Home boundary permeability	3.00	.80	.00	-.05	0.06	.03	.24**	.08	.10	-.24**	.41**	.16**	-.07	-.13*	.00									
Consequences (T2)																								
15. Work-to-home time-based conflict	2.70	1.00	-.03	-.01	.00	-.02	.05	-.02	-.03	.06	.40**	.31**	-.27**	-.15**	-.01	.46**								
16. Work-to-home strain-based conflict	2.54	.96	-.09	-.09	-.10	-.02	-.02	.03	-.05	.10	.33**	.29**	-.25**	-.23**	.04	.36**	.55**							
17. Home-to-work time-based conflict	3.20	0.76	-.16**	-.10	-.09	.05	.02	.01	.11	-.18**	-.02	.09	.16**	-.01	.05	.17**	.01	.01						
18. Home-to-work strain-based conflict	1.88	.70	-.10	.03	.03	.03	-.01	.00	-.05	.00	-.02	.14*	-.10	-.12*	.43**	.12*	.20**	.30**	.61**					
19. Work-to-home affective positive spillover	3.87	.59	-.09	-.11	-.10	-.05	.08	-.09	-.01	-.09	.01	.13*	.03	-.04	-.03	.10	.12*	.16**	.02	.00				
20. Work-to-home instrumental positive spillover	3.23	.72	-.16**	-.12*	.00	.05	.05	.01	.16**	-.20**	.01	.09	.16**	.02	.03	.19**	.02	-.02	.12*	.06	.40**			
21. Home-to-work affective positive spillover	3.72	.68	.02	-.09	-.03	.03	.04	-.08	.03	-.08	-.13*	.04	.08	-.05	.02	.03	-.03	-.08	-.02	.04	.55**	.46**		
22. Home-to-work instrumental positive spillover	3.52	.67	-.03	-.16**	-.03	.02	-.06	-.01	.10	-.08	.05	.04	.06	.04	-.01	.11*	.07	.00	.04	.02	.32**	.59**	.47**	

n = 308. Gender: 1 = female, 2 = male; Relationship: 1 = single, 2 = married; Household income: 1 = 30,000 or less, 2 = 30,000-50,000, 3 = 50,000-75,000, 4 = 75,000-100,000, 5 = over 100,000; Organizational level: 1 = Nonsupervisory, 2= First line manager, 3 = Lower level manager, 4 = middle level, 5 = upper level, 6 = executive, 7 = division head, 8 = CEO

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Measurement Model for the Antecedents of Boundary Permeability

I conducted a CFA to examine the factor structure of the measures used to test the antecedents of boundary permeability (segmentation preference at work, segmentation preference at home, workload, home demands, job control, home support, work boundary permeability, and home boundary permeability). An eight-factor model, in which all items in the model for all variables were included, was a less-than adequate fit of the model to the data (CFI= .88, RMSEA = .06, SRMR = .06, χ^2 [674] = 1384.41) due to the comparative fit index falling below the target .90, as recommended by Bentler (1990). Thus, I modified this initial model. To account for item wording similarity, five pairs of error terms were allowed to covary based on high modification indices scores: one pair each in workload, home demands, and work boundary permeability, and two pairs in home boundary permeability. This modified model fit the data well (CFI = .93, RMSEA = .05, SRMR = .06, χ^2 [669] = 1090.99), providing evidence that further examination of the structural model was justified.

Structural Model for the Antecedents of Boundary Permeability

Table 3 summarizes the results of comparisons of nested structural models. The baseline model (Model 1), which contained only paths from the six control variables to the two dependent latent variables, provided a baseline for comparison. Compared to this baseline model, the hypothesized structural equation model (Model 2) showed significant improvement ($\Delta\chi^2$ = 145.40, Δdf = 12, $p < .001$). Further, the fit indices for the hypothesized model fit the data well (CFI = .93, RMSEA = .04, SRMR = .04).

TABLE 3
Standardized Path Estimates of the Hypothesized Model of Antecedents of Boundary Permeability

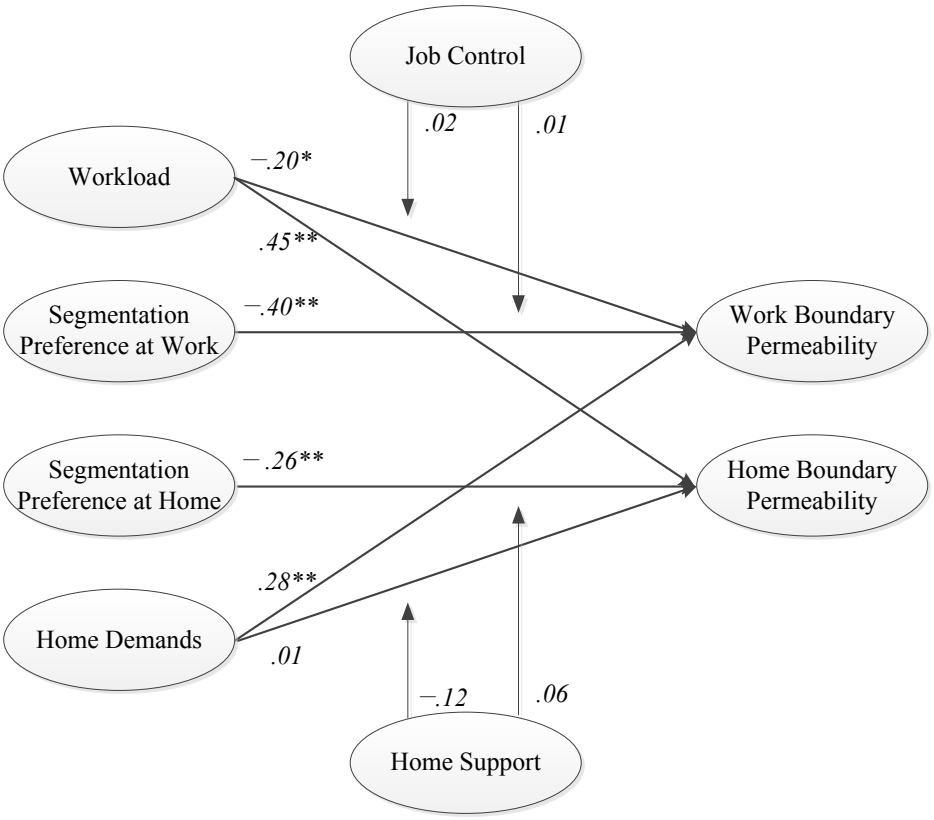
Models	χ^2	*df*	CFI	RMSEA	SRMR	Comparison	$\Delta\chi^2$	Δdf
Measurement model	1090.99***	669	0.93	0.05	0.06			
Model 1: Baseline model: Control variables only	255.26***	76	0.72	0.09	0.07			
Model 2 (Final model): Hypothesized model	109.86***	64	0.93	0.04	0.04	Model 2 vs. 1	145.40***	12
Model 3: Hypothesized model plus eight additional paths: job control to home boundary permeability and home support to work boundary permeability	109.49***	62	0.92	0.05	0.04	Model 3 vs. 2	0.37	2

*** $p < .001$

Following Anderson and Gerbing's (1988) suggestions, I investigated an alternative model that was possible from a theoretical point of view. Specifically, having strong home support may allow employees to focus completely on work-related matters while at work, affecting work boundary permeability. Similarly, job control may affect home boundary permeability by allowing employees to decide how and when to perform their jobs (e.g., individuals with high job control may be able to choose whether or not to bring work home). Thus, in the alternative model, two direct paths were added from home support to work boundary permeability and from job control to home boundary permeability. This model fit the data well (CFI = .92, RMSEA = .05, SRMR = .04), but was not significantly better than the hypothesized model ($\Delta\chi^2 = .37$, $\Delta df = 2$, $p > .05$). Further, the path coefficients for the two added paths were not significant. On the basis of this finding, I decided to keep the hypothesized model to test the hypotheses because it was more parsimonious.

The results for the standardized path estimates in the hypothesized model are summarized in Figure 3.

Figure 3: Structural Equation Modeling Results for the Antecedents of Boundary Permeability



n = 308. Standardized coefficients are provided for each path in the model tested. Control variables are not shown for ease of presentation.
*$p \leq .05$
**$p \leq .01$

Direct effects. In support of Hypothesis 1a, individuals whose segmentation preference at work was high experienced significantly lower work boundary permeability ($\beta = -.40$, $p < .01$). In support of Hypothesis 1b, individuals whose segmentation preference at home was high experienced significantly lower home boundary permeability ($\beta = -.26$, $p < .01$). In support of Hypothesis 2a, individuals who had a heavy workload experienced significantly *lower* work boundary permeability ($\beta = -.20$, $p < .05$). In support of Hypothesis 2b, individuals who had a heavy workload experienced significantly *higher* home boundary permeability ($\beta = .45$, $p < .01$). In support of Hypothesis 3a, individuals who had heavy home demands experienced significantly

higher work boundary permeability ($\beta = .28$, $p < .01$). Contrary to Hypothesis 3b, the predicted negative relationship between home demands and home boundary permeability was not significant ($\beta = .01$, $p > .05$).

The significant effects of control variables in the final model, not shown in Figure 3 to keep the figure simple, were as follows. Age was negatively related to work boundary permeability ($\beta = -.13$, $p < .05$). Number of children 18 or under living with a respondent was positively related to work boundary permeability ($\beta = .12$, $p < .05$). Being a male was positively related to work boundary permeability ($\beta = .14$, $p < .05$). Household income was positively related to home boundary permeability ($\beta = .27$, $p < .01$).

Moderating effects. Contrary to Hypothesis 4a, the moderating effect of job control on the negative relationship between workload and work boundary permeability was not significant ($\beta = .02$, $p > .05$). Contrary to Hypothesis 4b, the moderating effect of job control on the negative relationship between segmentation preference at work and work boundary permeability was not significant ($\beta = .01$, $p > .05$). Contrary to Hypothesis 5a, the moderating effect of home support on the negative relationship between home demands and home boundary permeability was not significant ($\beta = -.12$, $p > .05$). Contrary to Hypothesis 5b, the moderating effect of home support on the negative relationship between segmentation at home and home boundary permeability was not significant ($\beta = .06$, $p > .05$).

Measurement Model for the Consequences of Boundary Permeability

I conducted a CFA to examine the factor structure of the measures used to test the consequences of boundary permeability (work boundary permeability, home boundary permeability, segmentation preference at work, segmentation preference at home, work-to-home time-based conflict, work-to-home strain-based conflict, home-to-work time-based conflict,

home-to-work strain-based conflict, work-to-home affective positive spillover, work-to-home instrumental positive spillover, home-to-work affective positive spillover, and home-to-work instrumental positive spillover). A twelve-factor model, in which all items in the model for all variables were included was a less-than adequate fit of the model to the data (CFI= .89, RMSEA = .05, SRMR = .05, χ^2 [1418] = 2670.49) due to the comparative fit index falling below the target .90, as recommended by Bentler (1990). Thus, I modified this initial model. To account for item wording similarity, seven pairs of error terms were allowed to covary based on high modification indices scores: one pair in work boundary permeability, four pairs in positive spillover, and two pairs in home boundary permeability. This modified model fit the data well (CFI = .93, RMSEA = .05, SRMR = .05, χ^2 [1411] = 2275.29), providing evidence that further examination of the structural model was justified.

Structural Model for the Consequences of Boundary Permeability

Table 4 summarizes the results of comparisons of nested structural models. The baseline model (Model 1), which contained only paths from the six control variables to the eight dependent latent variables, provided a baseline for comparison. Compared to this baseline model, the hypothesized structural equation model (Model 2) showed significant improvement ($\Delta\chi^2$ = 1374.16, Δdf = 37, $p < .001$), but the fit indices for the hypothesized model did not fit the data

well (CFI = .89, RMSEA = .09, SRMR = .09).

TABLE 4
Standardized Path Estimates of the Hypothesized Model of Consequences of Boundary Permeability

Models	χ^2	*df*	CFI	RMSEA	SRMR	Comparison	$\Delta\chi^2$	Δdf
Measurement model	2275.29***	1411	0.93	0.05	0.05			
Model 1: Baseline model: Control variables only	1645.69***	111	0.17	0.21	0.14			
Model 2: Hypothesized model	271.53***	74	0.89	0.09	0.09	Model 2 vs. 1	1374.16***	37
Model 3: Hypothesized model plus eight additional paths: direct paths between the same dimensions of conflict (time- and strain-based) and positive spillover (affective and instrumental)	107.16***	66	0.98	0.05	0.04	Model 3 vs. 2	164.37***	8
Model 4 (Final Model): Hypothesized model plus three paths: direct paths between instrumental positive spillover, and direct path from home-to-work affective positive spillover to work-to-home affective positive spillover	109.96**	71	0.98	0.04	0.05	Model 4 vs. 3 Model 4 vs. 2	2.8 161.57***	5 3

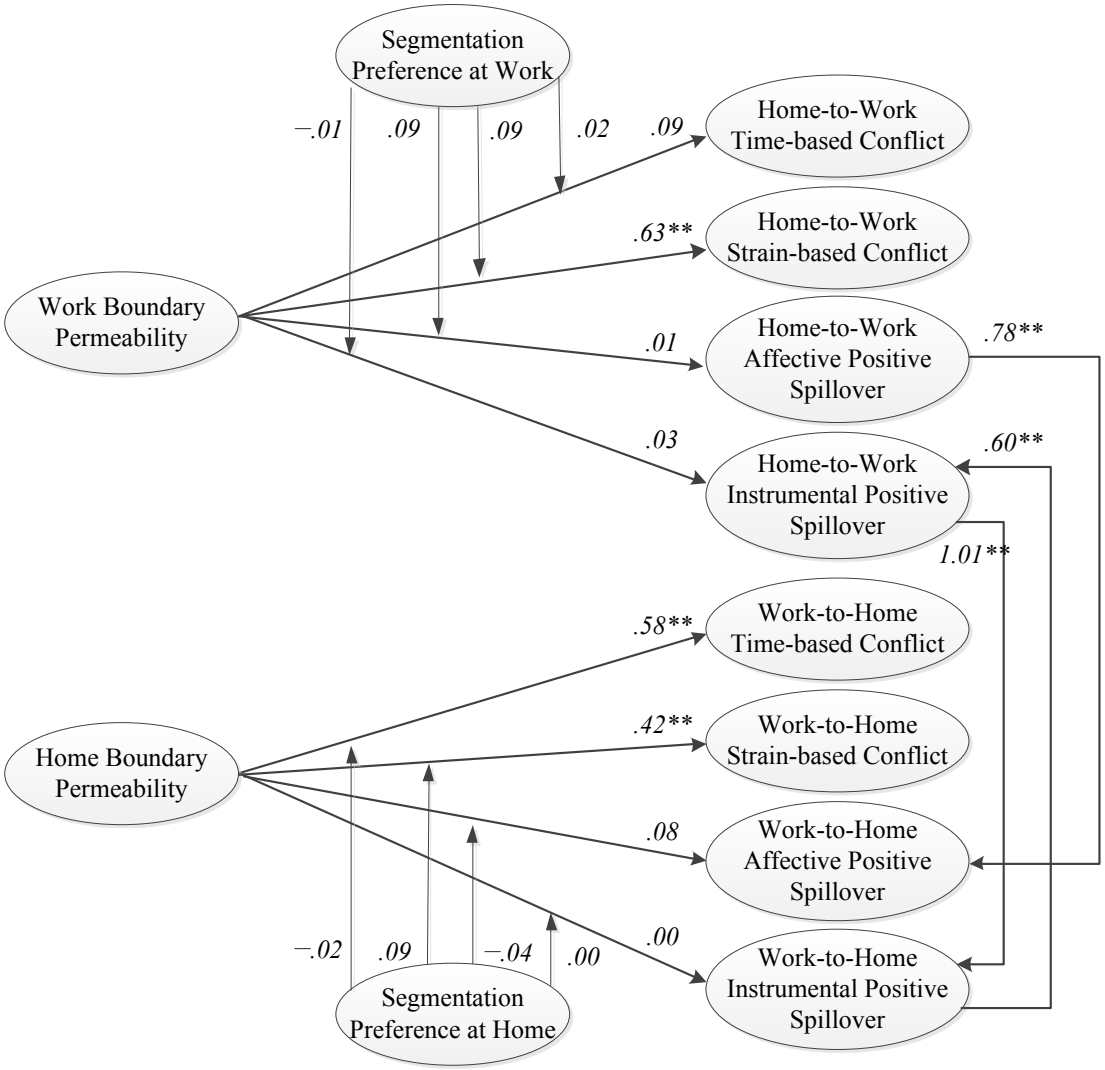
** $p < .01$
*** $p < .001$

I then tested an alternative structural equation model that added eight direct paths between work-to-home and home-to-work time-based conflicts, work-to-home and home-to-work strain-based conflicts, work-to-home and home-to-work affective positive spillover, and work-to-home and home-to-work instrumental positive spillover, to explore whether the consequences felt at work and in the home domain affect each other. This model, designated Model 3 in Table 4 fits the data well (CFI = .98, RMSEA = .05, SRMR = .04) and provided significant improvement in fit over the hypothesized model ($\Delta\chi^2 = 164.37$, $\Delta df = 8$, $p < .01$). Inspection of the results revealed that the path coefficients between work-to-home and home-to-work instrumental positive spillover, and from home-to-work affective positive spillover to work-to-home affective positive spillover were significant while the others paths were not significant. On the basis of these findings, I tested a second alternative model that dropped the paths with non-significant coefficients. This model, designated Model 4, fit the data acceptably

(CFI = .98, RMSEA = .04, SRMR = .05), and provided significant improvement over the hypothesized model (Model 2) ($\Delta\chi^2 = 161.37$, $\Delta df = 8$, $p < .01$). Further, this model was not significantly different from Model 3 ($\Delta\chi^2 = 2.70$, $\Delta df = 5$, $p > .05$). For the sake of parsimony, this second alternative model (Model 4) was retained as my final model.

The results for the standardized path estimates in the hypothesized model are summarized in Figure 4.

Figure 4: Structural Equation Modeling Results for the Consequences of Boundary Permeability



Direct effects. The effects of work boundary permeability on home-to-work conflict were mixed. Individuals with high work boundary permeability did *not* experience significantly higher home-to-work time-based conflict (Hypothesis 6a not supported: $\beta = -.09$, $p > .05$), but they did experience significantly higher home-to-work strain-based conflict (Hypothesis 6b supported: $\beta = .63$, $p < .01$). In support of Hypotheses 7a and 7b, individuals with high home boundary permeability experienced significantly higher work-to home conflict both on time-based ($\beta = .58$, $p < .01$) and strain-based dimensions ($\beta = .42$, $p < .01$). Contrary to Hypotheses 8a and 8b, individuals with high work boundary permeability did not experience significantly higher home-to-work affective positive spillover ($\beta = .01$, $p > .05$) nor did they experience higher home-to-work instrumental positive spillover ($\beta = .03$, $p > .05$). Contrary to Hypotheses 9a and 9b, individuals with high home boundary permeability did not experience significantly higher work-to-home affective positive spillover ($\beta = .08$, $p > .05$) nor did they experience higher work-to-home instrumental positive spillover ($\beta = .00$, $p > .05$).

The significant effects of control variables in the final model, not shown in Figure 4 to keep the figure simple, were as follows: Age was negatively related to work-to-home positive spillover, both affective ($\beta = -.14$, $p < .01$) and instrumental ($\beta = -.19$, $p < .01$), was positively related to home-to-work instrumental positive spillover ($\beta = .12$, $p < .01$), and was negatively related to home-to-work time-based conflict ($\beta = -.12$, $p < .01$). Being married was negatively related to work-to-home affective positive spillover ($\beta = -.12$, $p < .05$). Being a male was negatively related to home-to-work instrumental positive spillover ($\beta = -.10$, $p < .05$). Household income was positively related to work-to-home instrumental positive spillover ($\beta = .20$, $p < .01$), was negatively related to home-to-work instrumental positive spillover ($\beta = -.16$, $p < .01$), and was positively related to work-to-home affective positive spillover ($\beta = .17$, $p < .01$).

Moderating effects. Contrary to Hypothesis 10a, 10b, 10c, and 10d, none of the moderating effects of segmentation preference on the relationships between boundary permeability and conflict were significant ($\beta = .02$, $p > .05$; $\beta = .09$, $p > .05$; $\beta = .09$, $p > .05$; $\beta = -.01$, $p > .05$, respectively). Similarly, contrary to Hypothesis 11a, 11b, 11c, and 11d, none of the moderating effects of segmentation preference on the relationships between boundary permeability and positive spillover were significant ($\beta = -.02$, $p > .05$; $\beta = .09$, $p > .05$; $\beta = -.04$, $p > .05$; $\beta = .00$, $p > .05$, respectively)

CHAPTER 6. DISCUSSION

In this study, I examined the antecedents and consequences of boundary permeability in a sample of 308 full-time employees in an information technology company. In terms of the antecedents, I found that segmentation preference and demands at work and home were strong predictors of boundary permeability. This finding suggests that not only individual preference but also situational factors may lead one to have more or less permeable work and home boundaries. Interestingly, work boundary permeability was predicted by all three antecedents: segmentation preference, workload demands, and home demands. Specifically, the participants spent more time on personal matters during working hours because they preferred to integrate their personal life into the work domain, had a light workload, and had heavy home demands. These findings indicate that the work boundary became more permeable when individuals viewed integrating work and home lives as desirable, when they could afford to take time off for personal matters due to a light workload, and/or when their heavy home demands forced them to spend time dealing with home demands during working hours.

Home boundary permeability, however, was predicted by segmentation preference and workload, but not by home demands. Specifically, the participants spent more time on work matters while at home because they preferred integrating aspects of work into the home domain and/or had a heavy workload at work. These findings indicate that as individuals viewed the integration of work into a home life as desirable, they actually brought more work home. Also, in order to meet a heavy workload, they spent time on unmet work demands while at home. However, a highly permeable home boundary did not necessarily mean that their home demands were light, and they worked at home even when faced with heavy home demands.

Contrary to my prediction, resources at work (job control) and home (home support) did not moderate the relationships between segmentation preference and boundary permeability, and between work and home demands and boundary permeability. In other words, the resources the individuals had at work and home in the form of job control and home support did not buffer the effects of segmentation preference and work and home demands on boundary permeability. Given this result, in order to create a boundary in accordance with their preference and demands, individuals may need more active support from their employing organizations rather than relying solely on the resources inherent in their job and at home. Indeed, previous studies have pointed out a critical role of organizational support, such as managerial support, amenable colleagues, and family friendly company policies, in determining work-home outcomes (Anderson et al., 2002; Kossek & Lautsch, 2012; Kreiner, 2006). Thus, further investigation of how these organizational factors interact with segmentation preference and work and home demands to determine boundary permeability is warranted.

In regard to consequences, boundary permeability was closely associated with conflict in both domains, but not with positive spillover in either domain. Specifically, individuals with a *highly permeable work boundary* experienced strain-based home-to-work conflict. This result indicates that individuals who allowed home issues to enter their work domain were more vulnerable to excessive home-related anxiety and tensions while at work, feeling preoccupied with these issues and having a weakened ability to concentrate on work tasks. However, these individuals did not experience time-based conflict. Even though feeling strain, they did not perceive that the intrusion of home-related matters impeded the time they spent on work activities and responsibilities. Rather, boundary permeability affected their concentration and focus rather than their allocation of time. In terms of *home boundary permeability*, I found a

slightly different result. High home boundary permeability was associated with both time-based and strain-based work-to-home conflict. This finding suggests that individuals who spent much time on work-related matters while at home felt they had little time left to enjoy and contribute to their home life due to the pressure from work.

Contrary to my prediction, I found no evidence that boundary permeability was related to work-to-home or home-to-work positive spillover. In other words, individuals who integrated their work and home lives did not feel the beneficial transfer of positive affect, values, skills, and behaviors from one domain to the other domain. This result contradicts what Powell and Greenhaus (2010) found in their study. I speculate that the different findings may result from the different research designs. While I asked my respondents about their experiences in reference to their past week, Powell and Greenhaus (2010) asked their participants about their experiences *in general*. Thus, it is possible that my findings do not capture the entire spectrum of one's work and home lives since my variables were assessed based on a specific work week. However, it is also possible that what Powell and Greenhaus (2010) found may not accurately reflect one's daily experiences at work and home due to retrospective bias. Their participants may have had to recall distant events to answer the questions, which may compromise the accuracy of data as memory of past incidents fades over time and participants tend to inflate or deflate their recall of past behaviors (Rubin & Wenzel, 1996).

In addition, segmentation preference did not moderate the relationship between boundary permeability and its consequences (conflict and positive spillover). That is, differences in segmentation preference did not affect the extent to which individuals experienced conflict or positive spillover from a highly permeable boundary. Taken together, high boundary permeability seems to be more closely associated with work-home conflict than with positive

spillover regardless of one's segmentation preference. It seems that regardless of whether individuals prefer integrated or segmented work and home lives, they end up experiencing heightened work-home conflict (but not positive spillover) as the boundary between their work and home becomes increasingly blurred. One possible explanation for why segmentation preference did not moderate the proposed consequences relationships may lie in the characteristics of the sample that I studied. On the one hand, studying a group of information technology professionals ensured that my respondents used technology, a factor that has been shown to affect work-home consequences (Kreiner, Hollensbe, & Sheep, 2009). On the other hand, given these professionals were drawn to work in an industry that often requires troubleshooting via technology, even during non-work hours, there was likely less variance in their segmentation preferences than there might be were this not the case.

Theoretical Contributions

At a global level, the comprehensive, finer-grained models I tested advance the literature in several ways. To better understand boundary permeability, I investigated possible antecedents and consequences using scales with multiple dimensions and measuring both directions (work-to-home and home-to-work), linking them to work and home domains in a distinctive way. Prior studies focusing on either the work or the home domain have contributed to our understanding of the domain under study (e.g., Chen & Powell, 2012; Olson-Buchanan & Boswell, 2006; Powell & Greenhaus, 2010). However, without examining both domains in one study, it is hard to see whether there may be symmetrical effects on both boundaries or if the boundaries have different sets of antecedents and consequences. Indeed, the findings from my study examining both domains simultaneously suggest that work and home boundaries are asymmetrically permeable in some aspects. Although asymmetrical permeability has been suggested before (Eagle et al.,

1997; Frone et al., 1992b; Hecht & Allen, 2009), the factors and process underlying it are not clear. My findings indicate that individuals have different segmentation preferences for work and home domains and also that demands from work and home domains differentially affect the permeability of work and home boundaries. Work boundary permeability was affected by both workload and home demands while home boundary permeability was affected by only workload but not home demands. Further, unlike most previous studies (e.g., Hecht & Allen, 2009; Kreiner, 2006; Olson-Buchanan & Boswell, 2006), I used scales with multiple dimensions to examine work-home conflict and positive spillover. By doing so, we may have a better understanding of the complex nature boundary permeability effects. I found, for example, that a highly permeable work boundary led to strain-based rather than time-based conflict while a highly permeable home boundary led to both strain- and time-based conflicts. Overall, by offering a finer-grained analysis of linkages among the proposed variables, I provide another step toward a clearer understanding of boundary permeability.

The pattern of results in my dissertation offers specific contributions to the work-home boundary literature. First, prior explorations of the antecedents of boundary permeability have focused on individual factors such as role identification and segmentation preference (e.g., Hecht & Allen, 2009; Kreiner, 2006; Olson-Buchanan & Boswell, 2006; Powell & Greenhaus, 2010). Consistent with this research, my findings demonstrate that segmentation preference can affect boundary permeability. There is little research, however, on the role of situational factors in this regard (cf. Kreiner, 2006). To address this gap, in addition to assessing segmentation preference, I also assessed the importance of workload and home demands as predictors of boundary permeability. Demands and segmentation preference were both found to be strong predictors of boundary permeability. These findings not only reinforce the previously demonstrated

significance of individual factors like segmentation preference in predicting boundary permeability, but also they provide evidence that contextual factors indeed may play a pivotal role in determining work-home boundary permeability (Ashforth et al., 2000; Clark, 2000; Kossek & Lambert, 2005). Future research might similarly test sets of individual and situational factors simultaneously to determine the interplay of factors affecting work-home boundary permeability, as well as their relative impact.

In my study, I also modeled the potential positive and negative outcomes of boundary permeability. Although previous researchers have called for more attention to the positive consequences, a majority of studies have focused more on the negative consequences of boundary permeability. This practice has made difficult to know whether a highly permeable boundary leads an employee to good or bad experiences at work and at home. My results show that individuals with highly integrated work and home lives experienced a high level of work-home conflict, but not positive spillover. These findings lend support for domain conflicts in the debate on whether integrated work and home lives lead to work-home conflict or positive spillover (Edwards & Rothbard, 2000; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006). The verdict on the debate, however, needs more evidence. For example, unlike my findings, a recent study (Powell & Greenhaus, 2010) found that a highly permeable home boundary was associated with high levels of work-to-home positive spillover, as well as conflict. Thus, my findings reinforce the evidence of conflict resulting from a highly permeable boundary, but contradict Powell and Greenhaus's (2010) study which found support for positive spillover as an outcome. Given these equivocal results, future research might test further the relative effects of boundary permeability on both negative and positive outcomes.

Lastly, the use of multidimensional, multidirectional work-home conflict scales in this study contributes to a more nuanced understanding of what type of conflict boundary permeability impacts in each domain. Prior studies often have used a global scale without considering dimensionality and/or directionality (e.g., Hecht & Allen, 2009; Kreiner, 2006; Olson-Buchanan & Boswell, 2006). Even in cases in which a scale with multiple dimensions was used, hypothesized relationships were tested only with an overall conflict scale (e.g., Powell & Greenhaus, 2010). Given the complex effects of boundary permeability on work-home conflict, it is necessary to consider multiple dimensions and directions in relationships proposed. The results from my study show that conflicts individuals experience as a result of a highly permeable boundary are different for work and home domains. While boundary permeability predicted strain-based conflict in both the work and home domains, it predicted time-based conflict only in the home domain. So why the difference? Perhaps for the work domain, individuals feel the effects of a stronger situation in which they are not able to spend time on home-related matters and feel more obligated to work during work hours (Ashforth et al., 2000), or perhaps they are more conscious about time spent at work and engage in self-regulation when interrupted with home demands at work. As a result, they feel strain, but not an encroachment on time spent on work tasks. In contrast, for the home domain, individuals may be more weakly affected by the situation and find themselves able to spend as much time as they want working at home, even if it involves sacrificing their home lives or asking their family members to fill in for them in their roles. Whether they experience time-based conflict or not, however, strain reactions may be present anyway. Although they do not expend time on cross-domain matters, by constantly ruminating on those matters, they may experience anxiety and tension which may prevent them from fully concentrating on the activities required by the domain they are

physically located at the moment (Flaxman, Ménard, Bond, & Kinman, 2012; Geurts & Sonnentag, 2006). Future research should explore why individuals experience different patterns of conflict for work and home domains.

Limitations and Future Research

Although I took steps to eliminate certain threats to validity through a lagged design, my study has some limitations that should be noted. Because the sample comes from one organization and a majority of my respondents worked in information technology, caution should be exercised in generalizing the findings to members of other organizations or occupations. Organizations may vary in the extent to which they are supportive in regard to their employees' work-life balance, and occupations or jobs may differ in terms of the challenges they present in managing work and home boundaries (Kossek & Ozeki, 1998). Thus, testing of the proposed models in different contexts with a diverse set of samples is recommended to determine the validity of my findings across settings.

Second, all of my study variables were reported on by employees, albeit at two points in time. Self-report bias may inflate the estimate of the relationships; however, this bias does not necessarily affect findings since correlations among self-report variables are found to be near zero in many cases (Spector, 2006). Moreover, given that the variables in my study were intended to measure individuals' perceptions and experiences regarding their daily work and home lives, self-reports were appropriate (Brannick, Chan, Conway, Lance, & Spector, 2010; Hecht & Allen, 2009; Spector, 1994) .

Lastly, I measured the study variables over a one-week period, and asked the participants about that specific week's experiences. Prior studies have tended to assess participants' work and home experiences in general, requiring them to recall past experiences and thus increasing the

possibility of distorted recollection (Golden, 1992; Turner, Wheaton, & Lloyd, 1995). In this regard, my one-week study may have some advantages over previous research in terms of ensuring that respondents are able to report more accurately. Assessing the variables based on a specific week's experiences, however, may not capture the entirety of one's experiences at work and home, or dynamic changes that may occur in these domains over a longer period of time. Although I did work with the company to identify a "normal" or representative work week, testing of the proposed models in a longitudinal design is recommended.

Practical Implications

As organizations increasingly expect workers to be accessible during non-work hours, employees' work and home lives have become increasingly blurred. My study results suggest that a heavy workload further contributes to high home boundary permeability. When individuals have to think about or deal with work-related matters while at home, they may experience multiple types of work-home conflict, as my results suggested, or may not have time for needed recovery, which may lead to health issues and poor job performance over time (Park, Fritz, & Jex, 2011; Sonnentag, Binnewies, & Mojza, 2008). Thus, managers should ensure each individual has a reasonable workload, monitor progress, and if necessary, provide instrumental and emotional support. This may help prevent individuals from having a chronically heavy workload that can only be dealt with by sacrificing after-hours time while at home.

My results also showed that home demands likely creep into the work domain, leading to high work boundary permeability, and that work boundary permeability was positively related to strain-based work-home conflict. Given these findings, organizations may need to establish clear guidelines on dealing with home demands at work. If those activities are inevitable (e.g., employees with young children or aging parents), employers should consider more active ways

to assist with these home-related demands, such as onsite day care or flexible work arrangements so that their employees can concentrate on tasks without being distracted by home demands. Further, organizations might provide training in time management and work-life balance, so employees are better able to self-regulate their work and home boundary management patterns.

Conclusion

As boundaries between work and home become increasingly blurred, it is important for researchers and managers to understand the causes and effects of this blurring. Evidence from my dissertation shows that individual differences in segmentation preferences and situational factors such as workload and home demands predict the permeability of boundaries in the work and home domains. Specifically, high work boundary permeability was predicted by strong segmentation preference, heavy home demands, and light workload while high home boundary permeability was predicted by strong segmentation preference and heavy workload. Regarding the consequences of boundary permeability, the results indicate that highly integrated work and home lives led to work-home conflict, but not to positive spillover. High work boundary permeability led to strain-based home-to-work conflict while high home boundary permeability led to both time- and strain-based home-to-work conflict. In conclusion, while some similarities were found across work and home domains in terms of antecedents and consequences, a few differences were noted as well. In particular, while home demands affect work boundaries, they do not have the same effect on the boundaries people set at home. Further, intrusions across boundaries can cause conflict in both domains, but they are particularly problematic at home, where work intrusions lead not only to strain, but also to a sense of having inadequate time to devote to activities and responsibilities outside of work.

REFERENCES

Ammons, S. K. 2013. Work-family boundary strategies: Stability and alignment between preferred and enacted boundaries. ***Journal of Vocational Behavior***, 82(1): 49-58.

Anderson, J. C., & Gerbing, D. W. 1988. Structural equation modeling in practice. ***Psychological Bulletin***, 103(3): 411-423.

Anderson, S. E., Coffey, B. S., & Byerly, R. T. 2002. Formal organizational initiatives and informal workplace practices: Links to work–family conflict and job-related outcomes. ***Journal of Management***, 28(6): 787-810.

Ashforth, B. E., & Johnson, S. A. 2001. Which hat to wear? The relative salience of multiple identities in organizational contexts. In M. A. Hogg, & D. J. Terry (Eds.), ***Social identity processes in organizational contexts***: 31-48. Philadelphia: Psychology Press.

Ashforth, B. E., Kreiner, G. E., & Fugate, M. 2000. All in a day's work: Boundaries and micro role transitions. ***Academy of Management Review***, 25(3): 472-491.

Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. ***Academy of Management Review***, 14(1): 20-39.

Barnett, R. C. 2001. Women, men, work, and family. ***American Psychologist***, 56(10): 781-796.

Bentler, P. M. 1990. Comparative fit indexes in structural models. ***Psychological Bulletin***, 107(2): 238-246.

Brannick, M. T., Chan, D., Conway, J. M., Lance, C. E., & Spector, P. E. 2010. What is method variance and how can we cope with it? A panel discussion. ***Organizational Research Methods***, 13(3): 407-420.

Browne, M. W., & Cudeck, R. 1989. Single sample cross-validation indices for covariance structures. ***Multivariate Behavioral Research***, 24(4): 445-455.

Bulger, C. A., Matthews, R. A., & Hoffman, M. E. 2007. Work and personal life boundary management: Boundary strength, work/personal life balance, and the segmentation-integration continuum. ***Journal of Occupational Health Psychology***, 12(4): 365-375.

Byrne, B. M. 2001. ***Structural equation modeling with amos: Basic concepts, applications, and programming***. Hillsdale, NJ: Lawrence Erlbaum Associates.

Carlson, D. S., Kacmar, K., & Williams, L. J. 2000. Construction and initial validation of a multidimensional measure of work-family conflict. ***Journal of Vocational Behavior***, 56(2): 249-276.

Chen, Z. 2009. Work-to-family conflict, positive spillover, and boundary management: A person-environment fit approach. ***Journal of Vocational Behavior***, 74(1): 82-93.

Chen, Z., & Powell, G. N. 2012. No pain, no gain? A resource-based model of work-to-family enrichment and conflict. ***Journal of Vocational Behavior***, 81(1): 89-98.

Clark, S. C. 2000. Work/family border theory: A new theory of work/family balance. ***Human Relations***, 53(6): 747-770.

Clark, S. C. 2001. Work cultures and work/family balance. ***Journal of Vocational Behavior***, 58(3): 348-365.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. 2003. ***Applied multiple regression/correlation analysis for the behavioral sciences*** (3rd ed.). Hillsdale, NJ: Erlbaum.

Cortina, J. M., Chen, G., & Dunlap, W. P. 2001. Testing interaction effects in lisrel: Examination and illustration of available procedures. ***Organizational Research Methods***, 4(4): 324-360.

de Jonge, J., & Dormann, C. 2007. Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. ***Journal of Applied Psychology***, 92(1): 212-212.

Desrochers, S., Hilton, J. M., & Larwood, L. 2005. Preliminary validation of the work-family integration-blurring scale. ***Journal of Family Issues***, 26(4): 442-466.

DiRenzo, M. S., Greenhaus, J. H., & Weer, C. H. 2011. Job level, demands, and resources as antecedents of work-family conflict. ***Journal of Vocational Behavior***, 78(2): 305-314.

Eagle, B. W., Miles, E. W., & Icenogle, M. L. 1997. Interrole conflicts and the permeability of work and family domains: Are there gender differences? ***Journal of Vocational Behavior***, 50(2): 168-184.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. 2005. Work and family research in io/ob: Content analysis and review of the literature (1980–2002). ***Journal of Vocational Behavior***, 66(1): 124-197.

Edwards, J. R., & Rothbard, N. P. 1999. Work and family stress and well-being: An examination of person-environment fit in the work and family domains. ***Organizational Behavior and Human Decision Processes***, 77(2): 85-129.

Edwards, J. R., & Rothbard, N. P. 2000. Mechanisms linking work and family: Clarifying the relationship between work and family constructs. ***Academy of Management Review***, 25(1): 178-199.

Etzion, D. 1984. Moderating effect of social support on the stress-burnout relationship. ***Journal of Applied Psychology***, 69: 615-622.

Flaxman, P. E., Ménard, J., Bond, F. W., & Kinman, G. 2012. Academics' experiences of a respite from work: Effects of self-critical perfectionism and perseverative cognition on postrespite well-being. ***Journal of Applied Psychology***, 97(4): 854-865.

Friedman, S. D., & Greenhaus, J. H. 2000. ***Work and family-allies or enemies?*** New York: Oxford University Press

Frone, M. R. 2003. Work-family balance. In J. C. Quick, & L. E. Tetrick (Eds.), ***Handbook of occupational health psychology***: 143-162. Washington, DC: American Psychological Association.

Frone, M. R., Russell, M., & Cooper, M. L. 1992a. Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. ***Journal of Applied Psychology***, 77(1): 65-78.

Frone, M. R., Russell, M., & Cooper, M. L. 1992b. Prevalence of work-family conflict: Are work and family boundaries asymmetrically permeable? ***Journal of Organizational Behavior***, 13(7): 723-729.

Frone, M. R., Yardley, J. K., & Markel, K. S. 1997. Developing and testing an integrative model of the work–family interface. ***Journal of Vocational Behavior***, 50(2): 145-167.

Geurts, S. A. E., & Sonnentag, S. 2006. Recovery as an explanatory mechanism in the relation between acute stress reactions and chronic health impairment. ***Scandinavian Journal of Work, Environment, and Health***, 32(6): 482-492.

Golden, B. R. 1992. Research notes. The past is the past—or is it? The use of retrospective accounts as indicators of past strategy. ***Academy of Management Journal***, 35(4): 848-860.

Greenhaus, J., & Allen, T. 2011. Work-family balance: A review and extension of the literature. In J. C. Quick, & L. E. Tetrick (Eds.), ***Handbook of occupational health psychology***, 2 ed.: 165-183. Washington, DC: American Psychological Association.

Greenhaus, J. H., & Beutell, N. J. 1985. Sources of conflict between work and family roles. ***Academy of Management Review***, 10(1): 76-88.

Greenhaus, J. H., & Parasuraman, S. 1999. Research on work, family, and gender: Current status and future directions, ***Handbook of gender and work***: 391-412. Thousand Oaks, CA, US: Sage Publications, Inc.

Greenhaus, J. H., & Powell, G. N. 2006. When work and family are allies: A theory of work-family enrichment. ***Academy of Management Review***, 31(1): 72-92.

Grzywacz, J. 2002. ***Toward a theory of work-family facilitation***. Paper presented at the 34th Annual Theory Construction and Research Methodology Workshop, Houston, TX.

Hall, D. T., & Richter, J. 1988. Balancing work life and home life: What can organizations do to help? ***Academy of Management Executive***, 2(3): 213-223.

Hanson, G. C., Hammer, L. B., & Colton, C. L. 2006. Development and validation of a multidimensional scale of perceived work-family positive spillover. ***Journal of Occupational Health Psychology***, 11(3): 249-265.

Hayduk, L. A. 1987. ***Structural equation modeling with lisrel: Essentials and advances***. Baltimore, MD: Johns Hopkins University Press.

Hecht, T. D., & Allen, N. J. 2009. A longitudinal examination of the work–nonwork boundary strength construct. ***Journal of Organizational Behavior***, 30(7): 839-862.

James, L. R., & Brett, J. M. 1984. Mediators, moderators, and tests for mediation. ***Journal of Applied Psychology***, 69(2): 307-321.

Jett, Q. R., & George, J. M. 2003. Work interrupted: A closer look at the role of interruptions in organizational life. ***Academy of Management Review***, 28(3): 494-507.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. 1964. ***Organizational stress: Studies in role conflict and ambiguity***. Oxford, England: John Wiley.

Karasek, R. 1979. Job demands, job decision latitude, and mental strain: Implications for job redesign. ***Administrative Science Quarterly***: 285-308.

Karasek, R. 1985. ***Job content instrument users guide: Revision 1.1***. Los Angeles, CA: Department of Industrial and Systems Engineering, University of Southern California.

Karasek, R., & Theorell, T. 1990. ***Healthy work***. New York: Basic Books.

Katz, D., & Kahn, R. L. 1978. ***The social psychology of organizations*** (2nd ed.). New York: Wiley.

Kline, R. B. 2011. ***Principles and practice of structural equation modeling***. New York: The Guilford press.

Kossek, E. E., & Lambert, S. J. 2005. ***Work and life integration: Organizational, cultural, and individual perspectives***. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Kossek, E. E., & Lautsch, B. A. 2007. ***Ceo of me: Creating a life that works in the flexible job age***: Pearson Prentice Hall.

Kossek, E. E., & Lautsch, B. A. 2012. Work–family boundary management styles in organizations: A cross-level model. ***Organizational Psychology Review***, 2(2): 152-171.

Kossek, E. E., Lautsch, B. A., & Eaton, S. C. 2005. Flexibility enactment theory: Implications of flexibility type, control, and boundary management for work- family effectiveness. In E. E. Kossek, & S. J. Lambert (Eds.), ***Work and life integration: Organizational, cultural, and individual perspectives***: 243-261. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Kossek, E. E., & Ozeki, C. 1998. Work-family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior-human resources research. ***Journal of Applied Psychology***, 83(2): 139-149.

Kreiner, G. E. 2001. ***On the edge of identity: Boundary conflict and workplace fit***. Unpublished doctoral dissertation, Arizona State University.

Kreiner, G. E. 2006. Consequences of work-home segmentation or integration: A person-environment fit perspective. ***Journal of Organizational Behavior***, 27(4): 485-507.

Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. 2009. Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics. ***Academy of Management Journal***, 52(4): 704-730.

Marks, S. R. 1977. Multiple roles and role strain: Some notes on human energy, time and commitment. ***American Sociological Review***, 42(6): 921-936.

Marks, S. R. 2006. Understanding diversity of families in the 21st century and its impact on the work-family area of study. In M. Pitt-Catsouphes, E. E. Kossek, & S. Sweet (Eds.), ***The work and family handbook: Multi-disciplinary perspectives, methods, and approaches***: 41-65. Mahwah, NJ: Erlbaum.

Marshall, N. L., Barnett, R. C., & Sayer, A. 1997. The changing workforce, job stress, and psychological distress. ***Journal of Occupational Health Psychology***, 2(2): 99-107.

Medsker, G. J., Williams, L. J., & Holahan, P. J. 1994. A review of current practices for evaluating causal models in organizational behavior and human resources management research. ***Journal of Management***, 20(2): 439-464.

Meijman, T., & Mulder, G. 1998. Psychological aspects of workload. In P. J. Drenth, H. Thierry, & C. J. de Wolff (Eds.), ***Handbook of work and organizational psychology***, 2 ed.: 5-33. Hove, UK: Psychology Press.

Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. 2011. Antecedents of work-family conflict: A meta-analytic review. ***Journal of Organizational Behavior***, 32(5): 689-725.

Mischel, W. 1977. The interaction of person and situation. In D. Magnusson, & N. S. Endler (Eds.), ***Personality at the crossroads: Current issues in interactional psychology***. Hillsdale, NJ: Lawrence Erlbaum.

Nippert-Eng, C. 1996a. Calendars and keys: The classification of "home" and "work". ***Sociological Forum***, 11(3): 563-582.

Nippert-Eng, C. E. 1996b. ***Home and work: Negotiating boundaries through everyday life***. Chicago: University of Chicago Press.

Olson-Buchanan, J. B., & Boswell, W. R. 2006. Blurring boundaries: Correlates of integration and segmentation between work and nonwork. ***Journal of Vocational Behavior***, 68(3): 432-445.

Osterman, P. 1995. Work/family programs and the employment relationship. ***Administrative Science Quarterly***, 40(4): 681-700.

Parasuraman, S., & Greenhaus, J. H. 2002. Toward reducing some critical gaps in work and family research. ***Human Resource Management Review***, 12(3): 299-312.

Parasuraman, S., & Simmers, C. A. 2001. Type of employment, work–family conflict and well-being: A comparative study. ***Journal of Organizational Behavior***, 22(5): 551-568.

Park, Y., Fritz, C., & Jex, S. M. 2011. Relationships between work-home segmentation and psychological detachment from work: The role of communication technology use at home. ***Journal of Occupational Health Psychology***, 16(4): 457-467.

Piotrkowski, C. S. 1979. ***Work and the family system***. New York: Free Press.

Pleck, J. H. 1977. The work-family role system. ***Social Problems***, 24: 417-427.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. ***The Journal of Applied Psychology***, 88(5): 879-903.

Powell, G. N., & Greenhaus, J. H. 2010. Sex, gender, and the work-to-family interface: Exploring negative and positive interdependencies. ***Academy of Management Journal***, 53(3): 513-534.

Rothbard, N. P. 2001. Enriching or depleting? The dynamics of engagement in work and family roles. ***Administrative Science Quarterly***, 46(4): 655-684.

Rothbard, N. P., Phillips, K. W., & Dumas, T. L. 2005. Managing multiple roles: Work-family policies and individuals' desires for segmentation. ***Organization Science***, 16(3): 243-258.

Rubin, D. C., & Wenzel, A. E. 1996. One hundred years of forgetting: A quantitative description of retention. ***Psychological Review***, 103(4): 734-760.

Sass, D. A., & Smith, P. L. 2006. The effects of parceling unidimensional scales on structural parameter estimates in structural equation modeling. ***Structural Equation Modeling***, 13(4): 566-586.

Schaufeli, W. B., & Bakker, A. B. 2004. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. ***Journal of Organizational Behavior***, 25(3): 293-315.

Sheldon, S., & Burke, P. J. 2000. The past, present, and future of an identity theory. ***Social Psychology Quarterly***, 63(4): 284-297.

Sonnentag, S., Binnewies, C., & Mojza, E. J. 2008. "Did you have a nice evening?" A day-level study on recovery experiences, sleep, and affect. ***Journal of Applied Psychology***, 93(3): 674-684.

Spector, P. E. 1994. Using self-report questionnaires in ob research: A comment on the use of a controversial method. ***Journal of Organizational Behavior***, 15(5): 385-392.

Spector, P. E. 2006. Method variance in organizational research. ***Organizational Research Methods***, 9(2): 221-232.

Spreitzer, G. M. 1995. Psychological empowerment in the workplace: Dimensions, measurement and validation. ***Academy of Management Journal***, 38(5): 1442-1465.

Turner, R. J., Wheaton, B., & Lloyd, D. A. 1995. The epidemiology of social stress. ***American Sociological Review***, 60(1): 104-125.

Valcour, P. M., & Hunter, L. W. 2005. Technology, organizations, and work-life integration. ***Work and life integration: Organizational, cultural, and individual perspectives***: 61-84.

Van Yperen, N. W., & Snijders, T. A. B. 2000. A multilevel analysis of the demands–control model: Is stress at work determined by factors at the group level or the individual level? ***Journal of Occupational Health Psychology***, 5(1): 182-190.

Voydanoff, P. 2004. The effects of work demands and resources on work-to-family conflict and facilitation. ***Journal of Marriage and Family***, 66(2): 398-412.

Wajcman, J., Rose, E., Brown, J. E., & Bittman, M. 2010. Enacting virtual connections between work and home. ***Journal of Sociology***, 46(3): 257-275.

Wall, T. D., Jackson, P. R., Mullarkey, S., & Parker, S. K. 1996. The demands—control model of job strain: A more specific test. ***Journal of Occupational and Organizational Psychology***, 69(2): 153-166.

Yang, N. 1993. ***Work-family conflict and supervisor support.*** Paper presented at the Eastern Academy of Management.